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"FRUIT WORLD OF AUSTRALASIA."

Representing the deciduous, citrus and dried fruits industry of the Southern Hemisphere.

Published the First of each Month.

Editorial and Management Notices.

Articles and Photographs.—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's M.S.S.," postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos. only," will travel at 2 ozs., 1½d. A short description of the photos. should be written on the back.

Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

Renewal Subscriptions are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" offices (where copies and full particulars are obtainable) are as follows:—

Victoria (Head Office): 9 Queen Street, Melbourne. **New South Wales:** Carruthers, Farrum & Co., 77 King Street, Sydney. **South Australia:** W. F. McConnell, Grenfell Buildings, Grenfell Street, Adelaide. **Tasmania:** Saunders & Co., Murray Street, Hobart. **Western Australia:** D. L. Hetherington, Colonial Mutual Buildings, St. George's Terrace, Perth. **Queensland:** Gordon & Gotch Ltd., Queen Street, Brisbane. **New Zealand:** Gordon & Gotch Ltd., Wellington, Dunedin and Auckland. **Great Britain:** Harvey H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

R. E. BOARDMAN, A.F.I.A., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

Tasmanian Director: HON. L. M. SHOOBRIDGE, M.L.C.

News of the Month.

ADVERTISING FRUIT.

CONSIDERABLE ACTIVITY has been displayed in Victoria in regard to advertising to increase the consumption of fruit. Probably, the most effective lead was given by the Railways Department, which had printed a handsome poster size 40 in. x 25 in., which was posted up on railway stations throughout the State.

The Victorian Fruitgrowers' Central Association and its affiliated Associations ordered additional copies. These have been put into wide circulation.

The design of the poster shows a glass dish containing well-coloured specimens of Apples and Oranges. In the picture there are also shown Grapes, Cherries, Strawberries, Peaches, Lemons, &c. The design is really an effective and handsome one. The wording is as follows:—

"Keep Fit—Eat More Fruit. Delicious, Health-giving Fruit is a Necessity, not a Luxury. Take Some Home To-day. Help Us (the Fruitgrowers) to Help You."

In addition to this the Railway Department issued a pamphlet setting out statistics demonstrating the importance of the fruit industry and bright details relating to the health and antiseptic values of fruit.

The Victorian Government supplemented this work by publishing prominent advertisements in the public press, dealing with the value of fruit on health. In addition, the daily newspapers have given considerable space quoting the various fruits coming on the market and recipes, &c.

All this is very good, being of interest and value to the general public, as well as encouraging to the grower.

But it points the way to a bold, comprehensive scheme of advertising which could be taken up by the industry itself. The cost to the individual grower would be very small; the advantages to be reaped would be very great.

ADVERTISING FRUIT IN ENGLAND.

A proposal is on foot to conduct an advertising campaign in England to increase the consumption of fruit. It is recognized by the trade and all concerned that the success which has followed the American advertising campaigns could be repeated in England.

The proposal is that ¼d. per package be contributed each by the grower, the broker and the retailer, i.e., ¾d. per package, which would yield over £60,000. In other words, £1,100 per week could be spent in advertising fruit all the year round. Particular efforts would be made to give special emphasis to the various fruits as they arrive on the English market.

We have no doubt that Australian fruitgrowers would gladly stand behind such an important movement.

THE MENACE OF THE STARLING.

A CONTRIBUTOR from the Murrumbidgee Irrigation Areas asks if it would be possible to secure a visit to the Areas of the men who operate with nets to obtain supplies of starlings for the Melbourne Gun Club, and what expenses would be involved. Would these men obtain the starlings for shooting matches at the Melbourne Gun Club, and would the principal outlay be the fare and expenses of the netters?

The answer to this enquiry is that experienced netters, who obtain starlings for the Melbourne Gun Club, are available. It would not be a workable proposition, however, for the men, after capturing the birds, to take them in boxes to Melbourne for shooting purposes, even if expenses were paid. These experienced netters would probably be secured on the basis of wages for the length of time employed. The men would bring their nets and after capturing the birds would kill thousands daily.

The starlings are so cunning that it is practically impossible to poison them, and so far the only method of dealing with them is to capture them in their camping grounds by netting.

This is a matter which concerns all the State Governments. Big sums of money are spent annually in scientific research, and in ridding the country of scourges. The starling is a scourge, and yet for the expenditure of a moderate sum the pests could be destroyed in wholesale manner. Meanwhile, every season the starling is increasing at an astonishing rate, and should be tackled without any further delay whatsoever.

NATIONAL ADVISORY FRUIT COUNCIL.

THE NATIONAL ADVISORY FRUIT COUNCIL was called into existence at the instance of Mr. A. S. Rodgers, then Minister for Trade and Customs. As Mr. Rodgers has suffered defeat at the polls, a question has arisen as to the future of that Council.

As there is distinct scope for usefulness in a well-conducted and representative National Advisory Council, it would be a pity to lose the benefit of the work already done, and a suggestion has been made that the best points of the scheme be incorporated in the Australian Fruitgrowers' Federation, which will probably be the new name by which the Australian Conference of Fruitgrowers will be known after the next Convention in May.

These matters of organization and trade extension are worthy of the close attention of fruit producers and all interested in the industry. There are many problems that need earnest consideration, and wise decisions will have far-reaching effect for good.

EXPORT OF FRUIT.

2,000,000 Cases to be Shipped to England.

The Apple export season will commence about the middle of February. At the time of writing we have not the full programme for all the states. The following is the programme of Melbourne sailings fixed by the Oversea Shipping Representatives' Association and the members of the Victorian Fruit Exporters' Association:—

February: 15th, Sophocles, London; 17th, Orsova, London; 20th, Port Albany, Hull; 24th, Surrey, London and Liverpool; 27th, Port Sydney, Hull.

March: 1st, Ballarat, London; 7th, Moreton Bay, London; 16th, Diogenes, London; 16th, Berrima, London; 17th, Ormonde, London; 17th, Nestor, Liverpool; 20th, Palermo, London; 20th, Argyllshire, London and Liverpool; 24th, Somerset, London and Liverpool; 29th, Port Bowen, Hull; 31st, Narkunda, London.

April: 4th, Jervis Bay, London; 12th, Themistocles, London; 14th, Orvieto, London; 21st, Baradine, London; 21st, Anchises, Liverpool; 25th, Largs Bay, London.

Of these vessels, the Sophocles, Narkunda and Themistocles will practically complete their loading in Melbourne, and the Port Albany and Port Sydney will proceed to Tasmania to complete their cargoes after loading Melbourne allotments.

The Tasmanian programme totals 31 vessels, including three Orient mail steamers and the P. & O. mail liner Moldavia.

Export totals are anticipated as follows:—

	Bushels.
Tasmania	1,250,000
Victoria	500,000
Western Australia	250,000
South Australia	50,000
New South Wales	20,000

In round figures the quantity will be 2,000,000 cases of Apples and Pears, that is if Tasmania ships the estimated quantity. In some quarters the export from that State is set down at under 1,000,000 bushels.

Special efforts are being made to forward a consignment of Plums by the Esperance Bay, sailing 7th February, and this Victorian shipment will be augmented in Adelaide.

Pear Export.—Three steamers—Surrey, Somerset and Argyllshire—have already been placed under offer for Pear shipments under what is known as "Somerset conditions."

FREIGHT REDUCTION.

Of Benefit to Shippers.

Action by Commonwealth Government Line.

The Commonwealth Government line of steamers has decided to reduce freights for the current export season as follows:—

	Old Rate.	New Rate.
Apples (bushel)	5/-	4/-
Oranges (1⅓ bushels)	6/3	5/-
Pears (trays)	2/-	1/7

Very earnest efforts are being made and it is hoped that the conference lines will also reduce their freight accordingly.

PLANT QUARANTINE STATION NEEDED.

There is urgent necessity for the setting up of Federal quarantine stations through which new varieties can be imported. Fruitgrowers and nurserymen have found difficulty in securing seeds of the blight-proof Pear, Pyrus Usuriensis. America is importing this seed in large quantities. Australian quarantine officers would do well to remove all difficulties that stand in the way of these seeds being largely imported into Australia.

America has some excellent varieties of Peaches for canning. These are prohibited from entering Australia, as also are some of the choice new varieties of Apples, including the Golden Delicious, which is apparently one of the most remarkable Apples ever raised.

What is the reason for this restrictive policy? The world can obtain the best that Australia produces, yet we are prohibited from obtaining some of the choice things in the horticultural world from outside the Commonwealth. Even if considerable expense were incurred, it would pay handsomely to allow these choice varieties of fruits to enter the Commonwealth for wide distribution.

But the expense would be infinitesimal. Nurserymen have already offered to the Federal Government opportunities for quarantining part of their nurseries where varieties could be kept under surveillance until proven to be absolutely clean.

The Federal Quarantine Department would render a service to Australia by pursuing this matter and arranging for quarantine stations in convenient places and thus render some effective service to the great primary industry of fruitgrowing.

NEW WAGES LOG.

Growers in the Mildura (Vic.) district have ratified an agreement with the Australian Workers' Union for a wages log for the present season on the following basis:—

Permanent employees—75/- per week (increase of 5/-).

Pickers (18 years or over)—80/-.

Pickers (over 15 years)—70/-.

Pickers (under 15 years)—50/-.

Casual employees other than those covered by the award of 1920—14/- per day.

A fellow too old to learn is too old to live.

There is no substitute for commonsense.

THEY SAY—

That the sugar industry is out for preferential treatment, viz., fixed prices for five years (4¾d. retail), and an embargo against importation.

* * *

That Queensland citrus growers desire the appointment of an American citrus expert.

* * *

That the schemes for direct distribution of fruit from "orchard to consumer," largely advertised in Victoria, are not running smoothly.

* * *

That a wisely conducted campaign, on educational lines, for increasing fruit consumption, will permanently benefit the fruitgrowing industry.

* * *

That Victorian fruitgrowers seriously disagree with the Assistant-Minister for Agriculture: (1) in the matter of the appointments to the State Fruit Advisory Board; and (2) in not consulting the growers' association—as promised by the Premier—re the proposed appointment of a Superintendent of Horticulture.

* * *

That growers of canning fruits have put up a strong case to the Federal Country Party against the 10 per cent. reduction of fruit prices to growers for this season's canned fruit pool.

* * *

That the South African Fruitgrowers' Exchange is convinced of the excellence of the Washington Navel and Valencia late varieties of Orange, and is importing 500,000 first-class pedigree buds for distribution.

* * *

That with regard to affairs at the Victorian Orchardists' Co-op. Association Ltd., the directors would do well to place frank details in the hands of shareholders and the industry generally.

Commercial Items.

Western Market, Melbourne.

Proposed Change of Site.

Negotiations are in progress between the Melbourne City Council and the tenants of the Western Market, Melbourne, with regard to changing the market site. It is understood that the proposal to concentrate on the Victoria Market as a wholesale and retail market has been abandoned on account of practical difficulties, and the site now favoured is in Flinders Street, near the present Fish Market. This is convenient to trains and boats.

Narre Warren Orchardists Pty. Ltd. was registered on January 17 with an authorized capital of £15,000 in 30,000 shares of 10/- each. Subscribers: R. Webb, 2,500; A. G. Robinson, 1,000; J. W. Bailey, 250. Registered office, Narre Warren, Vic.

Scientific Manuring Benefits Orchards and Vineyards

Practical and Helpful Hints

NEVER BEFORE has the force of circumstances demanded such careful thought to the business side of crop production. There has arisen an accumulation of factors compelling the grower to study production on a basis of maximum yield per acre as against increasing production by enlarging the area under cultivation.

The increased cost of production must be met by increased yield and improved quality if the raising of any crop is to pay.

The various ways by which a grower may assist nature may be simply classified as application of fertilizer, liming, green manuring, cultivation. It really does not matter in what order you place them, for all are of more or less importance according to local conditions of soil and rainfall.

The cost of the right kind of fertilizer is not an expense: it is an investment, for it almost invariably returns a handsome profit for the outlay. The keynote of profitable manuring is obviously selection by means of expert guidance from those who know of the right kinds of fertilizers. Nothing is easier than wasting money on so-called "cheap" fertilizers.

The conditions of soil, climate and rainfall in Australia are so varied that unless one knows the special circumstances of a particular district one can only generalize, and although an expert can give sound advice speaking thus generally, it is much more likely to produce maximum results if he knows the district he is dealing with. All the same, one can point out what a certain crop requires for its growth on any soil—the thing to be considered in regard to any certain district or patch of soil being the probable extent to which such soil can supply, in available form, what that crop needs.

All fruit requires potash in ample quantity, nitrogen in lesser degree; and phosphoric acid must also be available if fruit is to set and mature.

Although **phosphoric acid** assists the growth of the tree and helps to strengthen its frame, the principal duty of this cheap plant food is to produce fruit, or seed, the reproductive part of any plant. But whilst this is the main virtue of a phosphate dressing, the latter should not be overdone, otherwise there is the risk of an abundance of fruit, but small and seedy. The addition of phosphate to a mixture should therefore be in proportion to (1) the lack of phosphate in the soil; (2) the amount of nitrogen and potash also present; in short, to balance the ration.

As to the best form in which to apply phosphate, that depends principally on three things—(1) the nature of the soil, whether acid or not; (2) the rainfall; (3) whether the phosphate is applied to benefit the coming crop or to provide feed for future seasons.

Superphosphate, being water-soluble, ranks first as a phosphatic fertilizer, for it can be applied just at the right time for the tree to benefit immediately, and need not be ploughed in months ahead with the risk of not coming into use because of dry conditions, as is the case with bone dust, but it should not be used on soils known to be strongly acid.

Next to super. comes **basic super.,** which, although not water-soluble, is in a quickly available form which gives results almost as soon as super., and moreover, has the additional value of tending to sweeten the soil by means of its lime content. It is particularly good for sour and wet soils. It should be used in preference to super. where the soil is infested with sorrel or shows other evidence of being acid.

Bone dust is, of course, a good medium for supplying phosphoric acid as a slowly available "feed," but to do good to any particular crop must be given plenty of time to be acted upon by soil moisture, etc. It requires much more rain to make it act than super. or basic super., and generally speaking is not so satisfactory for that reason, and it does not assure an adequate supply of phosphoric acid to any particular crop.

Potash is, under certain conditions for fruit production, the most important plant food to consider, and no plan of operations for a season's production can be considered complete unless an ample supply for such crop is provided, either by the soil or by the addition of a commercial form of potash.

Potash not only tends to improve the flavor of all fruits but is considered to increase their keeping qualities. Another important function of potash is in building up the frame of the tree and making it healthy and so more disease-resistant. It is found that young wood—which is to be fruit bearing in future seasons—contains more potash in proportion than any other part of the tree. This indicates the necessity of a plentiful supply of potash if the ultimate crop is to be big and good. If your trees are slow to make wood you may reasonably assume that the potash content of the soil is either low or not in available form. It is claimed that potash has much to do with the healthy setting of the fruit, and this theory would seem to be justified so far as some varieties go.

Nitrogen, although as essential in its own way as either of the other plant foods, is one upon which it is easiest to waste money, besides being of such a nature as to carry with it the danger of overdoing a good thing. The reason of this is that its main function is to promote luxuriant growth of wood and leaf rather than to produce either a lot of fruit or good quality at that. Doubtless, this is why very rich soils are not as a rule the best for fruit production, and on the contrary poor, hungry soils yield fruit of prime quality. Constant over-feeding with nitrogen is more likely to do harm than too generous supplies of either phosphoric acid or potash. Many growers found this out to their cost during the war, when potash was not available to provide a balanced ration, and the growers kept on using blood and bone until the trees showed signs of distress and the fruit was of distinctly poorer quality than when potash was available.

To briefly summarize the necessities of the business of crop raising, we would say "know the soil" and "use balanced rations." A horse won't continue to do good work on even the best of grass alone—it wants corn, too. Why expect a tree to thrive on nitrogen only when it also wants potash?

Every man who sets out to grow fruit should first of all have his soil analysed and not wait until the trees tell him something is wrong. If the fertilizers were made without first knowing exactly the nature and strength of all the raw materials, there would be some very queer results. It is all a matter of knowing one's business. The manufacturer has various materials from which to prepare the finished product. The grower has soil, climate, rainfall and trees as the raw material from which to produce the finished product. Where is the difference? Each is a business.

Although a knowledge of the available plant foods in the soil helps very materially to solve the problem of what fertilizer to apply for best results, i.e., weight and quality of crop, and margin of profit, there is an excellent guide to manuring in what is already known as to the special requirements of each crop.

This method of estimating the quantity and variation of plant food required by a particular crop was first suggested years ago by a French scientist, Ville, and has been more or less favorably regarded ever since; in fact, it may be said to be about the safest way of arriving at a correct formula, subject of course to variations according to the richness or otherwise of the soil where the said crop is to be grown.

Potash is a most essential plant food for all fruits, and an ample supply of available potash should be at the service of every tree; if not present naturally it should be added by means of a fertilizer, but potash costs money, and no more should be used than is actually required. That is just plain business, and everything done on the orchard should be on the same basis.

We would again just urge though, that the purchase of good fertilizers (the correct kind for your purpose)

should be reckoned as an investment, not an expense, which, under fair average conditions, will return a bigger profit than most other investments.

This has been amply proved in wheat growing and other branches of rural production, including fruitgrowing.

Orchard Fertilizers.

Fruit trees, like most other forms of vegetation, depend principally on the three main plant foods for their sustenance. Where phosphoric acid, nitrogen and potash are deficient, more or less, same must be added in some form or other by the grower.

Phosphoric acid ranks first in importance in the production of all fruit crops. Its function is to provide the wood and fibre of the tree and to increase the proportion of the fruit itself.

But trees continually fed with an excess of phosphoric acid would ultimately become stunted in growth, bearing heavy crops of undersized fruit, the seeds of which would be abnormally large and the flesh "stringy."

Nitrogen is the next in importance. Its particular function lies in the formation of foliage and growth of the tree and fruit.

The continuous excessive application of nitrogen promotes soft, leggy growth, which would be of insufficient strength to bear even the poor crop that would result. The skin, particularly of citrus fruits, would be excessively thick and highly colored, whilst the leaves would be an unnatural dark green color.

Potash is of importance in the formation of the juice and flavor of fruit. It improves the texture of the pulp and skin, and induces a heavy proportion of the former, whilst making the skin thin (as it should be).

It will therefore be seen from the foregoing that the ideal fertilizer is one that is a combination blended for the particular object in view. What is the right form in which to apply these foods? Expert investigators have no hesitation in recommending a mixture containing superphosphate (to provide the phosphoric acid), sulphate of ammonia (nitrogen) and potash. These three are the highest forms of soluble plant foods.

Some growers pin their faith to bone dust or blood and bone to provide the

food for their trees,

but neither of these fertilizers, although good under certain conditions, contains potash. Then, again, both are insoluble, which means that they require favorable weather conditions and have to undergo a lengthy process of chemical action in the soil before they become available as plant foods.

Suppose, for instance, you were to apply a mixture of blood and bone and potash, and weather conditions being dry, there might be sufficient moisture available to cause the potash to act and not the phosphoric acid and nitrogen in the blood and bone. These two most important foods would therefore be lost to that particular crop.

To overcome this possibility some growers apply the blood and bone in the autumn and the potash by itself in the early spring, so as, they think, to ensure the three foods working together, but then, again, weather conditions have to be reckoned with these three in the right form and judiciously. The winter, like the last two, may be dry. Rains may not fall till the spring or summer, and the blood and bone would not "work" in time for the fruit to benefit to the full extent.

Reprinted from "The Fruit World Annual and Trade Record."

(To be continued.)

Fruit Export

Faulty Sea Carriage Causes Loss to Growers.

Consignment System Condemned.

(To the Editor of "The Fruit World.")

Sir,—Recent issues of "The Fruit World" contain some illuminating remarks upon the carriage of fruit overseas. In the light of Prof. McAlpine's researches, it is plain that the presence of Brown Heart is prima facie evidence of bad carriage by the ships, and a plain case for compensation for an inefficient service given for good money received.

My own experience is as follows:—From my account sales of fruit sold in London is deducted a number of cases—some frosted, some rotten—so that I received on the average 2/6 per case nett f.o.b. The public probably paid 9d. per lb. retail for those Apples. All the agents, freighters, dealers, and distributers get a profitable cut and my share is ¾d. per lb. Out of this I have to pay for case, paper and packing, besides the 12 months' expenses of producing the fruit. Needless to say my profit, on which I am supposed to live, is a minus quantity.

We are told some cargoes were overheated (i.e., not cool-stored), for which we paid 6/- per case. On arrival much Brown Heart was found. This had the effect of frightening the dealers, and gave them an excuse to depress the whole of the shipments, so that even good cargoes were averaged down to 12/- per case. I paid 1/- per case to have some of the fruit insured, but I have not seen the color of any insurance money yet. The goose that laid the golden egg is killed as far as I am concerned. No more export for me.

This is an indictment against the whole system. It would be hard to point to a similar case in the whole history of Australian trade of such unparalleled folly. The growers and owners of this fruit, after all the work and risk of growing it, are fools enough to then send it 13,000 miles—still at their own risk—to be sold in London for whatever the dealer cares to give for it. It is time we looked the position in the face. The 1922 season should open the eyes of fruitgrowers. I am of opinion that the fruit ought to be bought and sold at the orchard or packing shed. If the export trade is lucrative enough to keep going, the dealers at the other end should arrange their own shipments and then they could make the shipping arrangements better than at present.

The Premier (Mr. Lawson) says it is foolish to blame the Government. Perhaps it is in the circumstances, for the industry is not thriving enough or important enough to attract the attention of the Government Department of Agriculture with its scores of officials. Fruitgrowing exists, not as a result, but in spite of them.

Have growers anybody they can look to for protection? The grower himself is largely to blame for being apathetic enough to allow things to remain in this unorganized condition. He deserves a leather medal for a form of self-reliance which does not do credit to his business sense. What we want is a body of growers or agents, disinterested enough to take a wide view of the matter and serve the industry as a whole.—Yours, &c.,

Q.E.F.

Branding Fruit Cases for Export

Importers' Numbers on Cases will Facilitate Sorting.

We have received from the Secretary of the National Federation of Fruit and Potato Trades Association Ltd., London, a complete list of shipping numbers of British importers of Australasian Apples and Pears. The numbers were balloted for and allotted in the order in which they were drawn. On pages 438-9 of the January edition of the "Fruit World," we published diagrams showing the manner in which the number should be placed on the case. This number will facilitate sorting at British ports, and it is urged that growers should stencil the number on the case at both ends in four-inch figures.

The names of the importers and their numbers are as follows:—

London—Messrs. Yeoward Bros., 20 to 23; Geo. Monro Ltd., 25; Overseas Farmers' Co-operative Federations, 27 to 41; Keeling & Hunt, 42; G. Da Costa, 44 to 48; Isaacs Bros., 49; Dominion Producers' Agency Ltd., 50 to 55; S. Larkinson Ltd., 59; J. Bradnum, 67; Nothard Lowe & Wills Ltd., 70 to 79; Dalgety & Co. Ltd., 80 to 82; F. W. Moore & Co. Ltd., 83 to 94; D. D. Pankhurst, 95; T. J. Poupart, 97; Geo. Tabor Ltd., 101 to 102; Ridley & Houlding, 103; Garcia Jacobs & Co., 30 to 31; E. A. O'Kelley & Co., 114; Dan Wuille & Co. Ltd., 115 to 117; E. Jacobs and Sons, 118; W. D. Peacock & Co., 119 to 128; Fruit & Produce Exchange, 130; Margetson & Co. Ltd., 131 to 132; F. C. Bradley & Son Ltd., 133; W. Dennis & Sons Ltd., 134 to 139; E. H. Lewis and Son Ltd., 148 to 150.

Liverpool—J. Johnson, 26; Woodall and Co., 60; J. Adam, Son & Co., 61; J. C. Houghton & Co., 104 to 109; McGeorge & Jardine, 111; L. Connolly and Co., 113; Glover, Hill & Co., 140 to 142.

Glasgow—T. Allan & Co. Ltd., 24; Thomson & Matherson Ltd., 43; Simons and Co. Ltd., 56-58; L. & H. Williams, 129.

Hull—Jefferson & Gosling, 62 to 65; B. & J. Shaw, 100; White & Son Ltd., 110; Humber Fruit Brokers Ltd., 143.

Manchester—J. & H. Goodwin Ltd., 147.

Southampton—Simons (Southampton) Ltd., 144 to 146.

Numbers for some of the firms doing business with Australia, such as T. Walton Ltd., Chas. Knights, Swann and Co. (London), A. Campbell & Co. (Glasgow), and others, are not mentioned in above list. These have probably been allotted since.

AT REST.

A Pioneer Passes.

Mr. Tom Petty, J.P., Doncaster, Vic.

Widespread regret is expressed at the sudden death of Mr. Tom Petty, J.P., of Doncaster, Vic., who passed away on January 22.

The deceased had attained the ripe age of 77 years; he led an active life; even at the time of his death he was the elected representative of the local growers on the district Pear Pool.

The late Mr. Petty, as a very young man, arrived in Australia from England with his parents. After a short period of contracting work, fruitgrowing was taken up and it became Mr. Petty's life work—he was one of the pioneer orchardists of 60 years' standing.

In district and municipal affairs the deceased gentleman was active, possessing ability, force of character and energy, he assisted in the progress of the district, and was himself successful in his enterprises. His courteous and kindly disposition won for him a wide circle of friends.

A few years ago the late Mr. Petty visited the land of his birth for a trip, whilst he enquired into methods of fruit handling, and was able, on his return, to give useful information to his fellow growers.

The deceased leaves a widow and a grown up family of eleven sons and daughters.

Of him it may be said, in the words written by Shakespeare—

"His life was gentle; and the elements
So mixed in him, that Nature might stand up,
And say to all the world, 'This was a man.'"

VICTORIA

Orchard and District Notes.

Association Meetings.

The principal orchard operations for February are the harvesting of the later varieties of Plums and early Pears and Apples.

Irrigation and Cultivation.—A continuance of irrigation will probably be necessary. When water is conveyed for a considerable distance in an open furrow over loose ground, there is apt to be a loss from soakage. This can be avoided by the use of down spouting, 3 in. and 2½ in. being suitable sizes.

This spouting is also very convenient in place of head drains, as a trickle of water can be let out at any desired joint. On hilly country it also prevents scouring when water has to be run down a slope. Cultivation should as far as possible follow irrigation.

Spraying.—Continue spraying with arsenate of lead for Codlin Moth and Light Brown Apple Moth. The usual strength in this district is 5 lbs. to 100 gallons, and very satisfactory results are obtained.

The prevalence of Codlin Moth depends to a large measure on seasonal conditions, the only noticeable ingress of grubs this year was during the hot spell at the end of November. Spraying at that time kept it under control, and there is little in evidence of it now.

Export and Cold Storage.—Everything should be got in readiness for the export of fruit and picking for cool storage during March. Supplies of all necessary material should be on hand.

Hardwood cases, as supplied by the mills in shooks, are always cut to allow for shrinkage; if the cases are used in a green state, as a large proportion of them are, this means a considerable loss to the grower. A small circular saw to cut the ends to proper width is a good investment.

Manures.—Every second or third year a crop of legumes—Field Peas are very suitable—should be planted for green manuring. These should be sown in April or May to allow a good growth before the winter.

A disc plough is very convenient if the ground be hard.

Two cwt. of **super.** per acre can be sown with the Peas, and in the early spring when the Peas are ploughed in 3 to 4 lbs. of **nitrate of soda** or **sulphate of ammonia** per tree will give good results.

The greatest need for nitrogen is when the fruit is setting; if the application is made six weeks before this, it will be available when required. To give a complete manure an addition of potash is necessary: this can be applied at the same time as the nitrogen.

Owing to the high cost I have not used potash to any extent for a few years, though prior to the war I used it extensively. No ill effect is noticeable; it may be that the supplies previously given are not yet exhausted.

With the deep-rooting system of fruit trees, results from manuring are not so apparent during the first year as with cereals.

In **picking for export** by the early boats only a small proportion of the fruit is of sufficient size, this being **picked is equivalent to thinning** the crop and results in better growth by the remainder and a bigger average size for the entire crop.

Over 70,000 cases were shipped from Harcourt last year; the crop this year is hardly as good, and the quantity available for export will probably be about 50,000 or 60,000 cases.

Bud Selection.—Special stress is laid on certain strains in live stock, poultry, etc., and it is equally important in the orchard. All buds and scions should be selected from trees that are vigorous growers and good and regular croppers.

There is a big field awaiting investigation here, and the results of careful experiment could not help but be beneficial to the industry in obtaining trees of greater vigour and fruitfulness, and also more resistant to disease.

Jas. H. Lang.

Harcourt, Vic.

Tyabb.

At the last meeting of the fruitgrowers' Association the Tyabb stationmaster (Mr. Bentleigh) attended, offering his utmost co-operation with the growers in the matter of trucking. It was decided to recommend to him that a Melbourne truck be supplied on Mondays, Wednesdays, and Thursdays; Sydney on Thursday, and Brisbane on Friday.

At the next meeting a plan of distribution to the Northern wheat areas by the Association will be discussed.

Booking for the interstate traffic is now fairly heavy—Gravensteins and Pears going to Brisbane, and William's Favourites to Sydney.

The plentiful rains at Xmas have been followed up again by a welcome downpour on the 18th of January.

The Annual Convention of Central Association.

Fruitgrowers of the Mornington Peninsula are delighted at the prospect of having the annual convention at Frankston. The offer was made to the Central Association of the use of Council Chambers by the Frankston and Hastings Shire Council, on the motion of Cr. A. J. Alden, president of the Tyabb Fruitgrowers' Association.

Those attending the conference will spend a few days in what is perhaps Victoria's foremost seaside resort, while from there motor runs will be arranged to Somerville, Tyabb, Hastings, Red Hill, Mooroduc—undoubtedly the finest fruitgrowing area in the State.

[There's nothing like boosting, is there? Readers in other centres, even if they don't agree with our correspondent, will admire his enthusiasm.—Editor.]

A record conference, both in business and delegates, is expected.

Hastings.

Apricots in the Hastings district are abnormally late this year, and growers are fortunate in obtaining satisfactory prices. The cool store has been running since New Year for the benefit of Apricot growers.

Export agents have been active in canvassing for fruit for abroad, but there is not the quantity offering which went last year.

One prominent grower, who would have exported 3,000 cases if the freight had been reduced to 4/-, intends sending 300, declaring that he refuses to be bled by the shipping companies.

45-year-old Broompark Pear Tree, in the orchard of Mr. J. H. Lang, Harcourt, headed back and grafted September, 1920. The tree, which was cut 12 feet from the ground, measured 9 inches in diameter where cut.

Bunyip.

The principal fruits grown in Bunyip, Garfield and Tynong are Apples and Pears, though some of the older orchards contain a fair proportion of Cherries and Plums.

The fine clay subsoil and granite foundation throughout this district ensure long life to the trees, and rich, warm color in the fruit. Many young orchards are now just coming into bearing, and on the future these hills are likely to be the centre of a great fruitgrowing district.

The season has been a trying one—heavy rains in October and November, followed by long dry spell in December. Heavy hailstorms also have done much damage to certain orchards, but on the whole, the season is a far better one than that of last year, and the prospect for crops are good.

Apples are medium to heavy, Pears medium, Plums heavy. The principal varieties planted are:—

Apples.—Gravenstein, Jonathan, King David, Delicious, Sturmer, Rokewood, Rome Beauty and Yates.

Pears.—Williams, Packham's, Vicar of Winkfield.

Plums.—Orleans, Japanese (Burbank, Satsuma, Wickson), Diamond, Grand Duke, Angelina.

District Trading Company.—Some of the growers have formed themselves into a company — **The Bunyip Direct Fruit Supply.**

The orchards here lie north of the railway, on the foothills of the Divide. South of the line is the great Koo-wee-rup Swamp—split up into small holdings, with a fairly large farming population. The growers realised that if they had a local depot in the township for the sale of case and half-case lots, they should be able to dispose of a good deal of fruit at prices better than those of the city, and yet acceptable to the farmers and townsfolk.

The distributing scheme is now in operation, and orders for Plums and Apples are being dealt with.

A very wideawake Progress Association in Bunyip has interested itself in the matter, and the growers hope to do something to remove the slur often cast upon country towns—that it is impossible to buy decent fruit therein.

VICTORIAN FRUITGROWERS' CENTRAL ASSOCIATION.

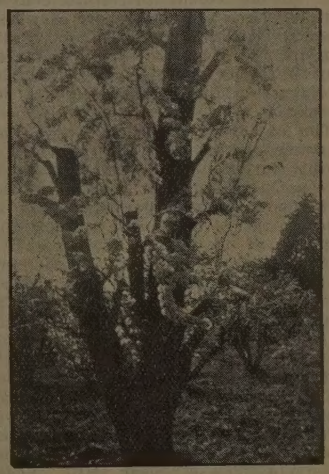
The monthly meeting of the Executive was held on January 11. Present: Col. W. E. James (in the chair), Messrs. J. Tully, J. G. Aird, J. W. Bailey, R. Mair, H. H. Hatfield, A. F. Thiele, E. E. Meeking, J. W. Aspinall, and the Secretary and Treasurer. Apologies were received from Messrs. Jones, Henderson, Jordan.

Experimental Shipment.—Mr. Meeking reported that 86 packages of Peaches (Zerbe No. 1 & Hales), Plums, and Apricots had been sent to England in the experimental chamber of the "Hobson's Bay." It had been arranged to carry them at a temperature of 33 deg. to 35 deg.

Appointments to State Advisory Board.—The Secretary reported that no reply had been received of the Minister for Agriculture in regard to the Central's protest against the second appointment. The Minister was severely criticised for his attitude in this matter. A motion was submitted by Mr. Bailey that in view of the Minister's unfair treatment the Central withdraw from the State Advisory Board, but lapsed for want of a seconder. It was eventually decided that Mr. Tully and the Secretary interview Mr. Pennington.

Superintendent of Horticulture.—Mr. Pennington, Assistant-Minister of Agriculture, was again severely criticised for his refusal to allow the subcommittee from the Central to go through the list of applicants. The Premier had made a definite promise in this respect. Further representations are to be made to the Minister.

Fruit Pool.—Mr. Tully directed attention to the reduced prices being paid to growers for fruit sent to the Federal Canned Fruit Pool, as compared with last year. Pears were reduced to £10 ton, Peaches £10, Apricots £10. Last year the prices were: Pears, £11/13/4; Peaches, £10/10/-; Apricots, £10/10/-. Pears were the best sellers, yet the price had been reduced proportionately lower than Peaches. He moved that this Executive support Mr. Foster in his efforts to secure higher prices for pool fruit, and a deputation be arranged to the Minister for Customs. —Motion carried.



Same tree in October, 1922, with Winter Nelis grafted on. It is expected that one case of Pears will be harvested this year.

Pear Shipments.—It was decided to approach the Exporters' Handling Committee in regard to the possibility of Pear shipments on the "Esperance Bay" in February, also other steamers.

Next meeting (Council) is to be held on **February 21, at 11 a.m.**

Orchardist Wanted.

Close to Melbourne. Must be a Good Packer. Highest Wages. Apply

Mr. STOTT, "Elinora" Orchards Wheeler's Hill, Vic.

ORGANIZING VICTORIAN CITRUS GROWERS

Erection of District Packing Sheds discussed—Export and Local Markets

In accordance with a resolution carried at the recent interstate conference of citrus growers, report of which was published in the December "Fruit World," the executive of the Victorian Central Citrus Association visited the 17 districts which are affiliated with the association.

The object of the visit was to review the operations of the Association during the twelve months of its existence and to discuss the question of the erection of district packing sheds in order to insure the better grading and packing of Oranges. The executive delegates were Messrs. G. Mussen and B. S. B. Cook; they were accompanied by Messrs. M. J. Canny (Outdoor Superintendent, Victorian Railways), and S. A. Cock (Government Citriculturist), representatives of the "Fruit World" and other papers were also present.

The districts were visited in the following order:—Cobram, Shepparton, Kyabram, Echuca (including Perricoota and Madowla), Bamawm, Barham, Riverside, Tresco, Swan Hill, Nyah, Mildura, Merbein, Irymple, and Curlwa.

Good meetings were held in each centre, and growers followed with interest the addresses by the speakers. The party was shown round the various districts and an opportunity given to obtain a general idea of the acreage planted to Oranges.

In the course of his address, Mr. Mussen referred to the formation of the Association, and its efforts during the past twelve months, both in regard to the local and oversea marketing of Oranges. **In regard to export** he stated that in view of the increased production of Oranges throughout the State it was absolutely necessary to export the surplus otherwise the local market would be glutted. During the season just closed nine shipments were sent to the London market, representing 50,000 cases. This fruit had arrived in varying conditions, but as all the account sales were not yet to hand, and insurance had not been collected, it was impossible to make any definite statements regarding the results. The shipments had proved conclusively that Oranges could be landed in Great Britain in a satisfactory condition on steamers sent via the Suez Canal; shipments via the Cape had turned out most unsatisfactorily. It was also proved that Oranges could be landed in London in good condition as late as November. London prices ranged from 23/- downwards; in some cases higher prices were realized.

[Reports are just to hand for a shipment of 147 cases of Oranges sent to London on the "Esperance Bay," and sold in London about the end of November. Prices realized 37/6 to 50/- per case.—Ed. "F.W."]

It must be borne in mind, stated Mr. Mussen, that South Africa sent 370,000 cases of Oranges to England with which we had to compete. South African fruit was established on the market, whereas we had to fight our way in. Added to this, there was an unprecedented glut of soft fruit in Great Britain, and on the Continent, which had its effect on the prices paid for Australian Oranges. In addition to London consignments, 10,000 cases were sold to American buyers at 16/- f.o.b., who resold at 37/6 per case. The Australian Trade Commissioner was securing a report with regard to the further prospects in America, and it is hoped that U.S.A., with its population of 110,000,000, and Canada, 10,000,000, will provide an outlet for Australian Oranges, our fruit coming on the market at the opposite season to the Californian.

Close inquiries had been made in regard to the Eastern markets, and the Trade Commissioner's report showed that during the months of May to October, China could take 5,000 cases of Oranges per month.

A conference of exporters of goods to the East was to be held shortly, and it was hoped that as a result arrangements would be made for steamers to run between Australia and Shanghai (China).

The New Zealand market had not yet been fully developed. The duty which was not removed until September prevented much fruit being sent in the season just closed. Already inquiries had been received for 10,000 cases of Navels and 10,000 cases of commons during the coming season. All fruit sent to New Zealand would be the same standard as export fruit.

If the 1923 citrus crop were normal, it would be neecssary to export overseas about 100,000 to 150,000 cases. It was hoped that by a reduction in freight, cutting out insurance against deterioration, and other sundry savings, the charges would be reduced by 6/- per case.

"It must be recognized," continued Mr. Mussen, "that **export is vital to the industry.** Districts like Bamawm, Cobram, Mildura, etc., will each be producing annually within the next three or five years sufficient to supply the Melbourne market, which, according to statistics compiled during the past season, is capable of absorbing about 200,000 cases of Oranges annually, irrespective of that sent from other States. There is no doubt if the 50,000 cases exported this season had been left on the local markets, the result would have been chaotic and prices down to about 3/-, 4/- per case."

Mr. Mussen further dealt with the controlling of the local market and the proposal to form the association into a company, details of which were published in our December edition.

Mr. Cook also addressed the meetings, and pointed out ways in which the Central body could assist district associations in purchasing orchard requisites, etc. Referring to cull Oranges, he stated efforts were made to dispose of a quantity. They were in touch with a manufacturer who would in all probability handle about 50,000 cases next season. He urged all growers outside their district organizations to join up. The export trade was going to develop into a large business **and the growers through their association would control the whole of the refrigerated space available for Oranges,** as they were the only body that

could guarantee a quantity sufficient to fill the chambers.

Dealing with Lemons, he said the position was serious, but the association had not dropped the idea of assistance. A scheme had been submitted, and if materialized, it would be the means of disposing of about 1,000 tons annually. Inquiries had also been received from a Queensland buyer for 500 tons for next season. These inquiries were being closely followed up, and Lemon growers would be advised in due course.

Speaking at the various districts, Mr. M. J. Canny (Railway Department), in response to propositions submitted for erecting packing sheds on railway sidings, assured the growers of the Commissioners' sympathy and keen interest. The Department recognized the value of the fruit trade; it was good business for them, and they wanted to give service to consignors and help growers in every way in developing markets, both locally and overseas. During last season the revenue from fruit had increased 50 per cent., and now reached £128,000 annually. For the year ending June 30, 1922, 122,000 tons of fruit were handled by the railways, as compared with 85,000 for the previous year.

The establishment of packing sheds was a step in the right direction, and the proposals submitted would receive favorable consideration. Plans and estimates of packing sheds would be prepared and if the Commissioners approved of same, particulars and terms would be sent along to the district associations.

As a result of the trip it is hoped that packing sheds will be arranged for at Cobram, Lockington (Bamawm, Rochester and Ballendella), Echuca (Perricoota and Madowla), and Merbein. Dried fruit sheds are in existence at Mildura and Nyah, and probably some arrangements will be made for Oranges to be packed there also. At Kyabram it is proposed to use a portion of the new cannery, which has just been completed.

Mr. Cook's address is published elsewhere in this issue.

HANDLING ORANGES FOR MARKET.

As an illustration of the way in which Australian oranges harvested under the instructions laid down by the V.C.C.A., and loyally followed by growers will keep, the following incident is worthy of note:—

Mr. H. H. Gissing, of Riverside, Vic., picked a quantity of oranges on June 1st for export by the s.s. "Moreton Bay." These were clipped from the trees, gloves were used in handling, and in all the operations the oranges were handled with the greatest care. At the time Mr. Gissing dispatched his fruit for export he packed a case to keep in his grove. This case was stored in a shed and was subject to all the usual variations of temperature. It was not opened until July 27th, nearly two months after packing, and every orange was sound. A further test of the fruit came about in an unexpected way. Mr. Gissing sent a small box of nine of these oranges to the secretary of the V.C.C.A., and these remained in the perishable goods office for over a month when the railway authorities informed the consignee that there had been a box of oranges waiting delivery since the end of July.

This box was opened on the 4th instant, and all the fruit, with one exception, was in excellent condition, the exception being an orange in a wrap marked "X." Two oranges had been slightly damaged in packing, and were marked in this manner to differentiate them from the others. One of these damaged oranges was sound, and the other covered in blue mould. Each of the oranges was wrapped in wax proof paper and the unsound orange did not in any way contaminate the rest of the fruit in the box.

Brown Rot in Oranges.

According to Mr. S. A. Cock, the Victorian Government Citriculturist, Brown Rot is very prevalent and is doing much damage to the citrus groves in and around the Gosford and Kurrajong districts.

Varieties for a Commercial Citrus Grove.

Mr. S. A. Cock, Victorian Government Citriculturist, recommends the following varieties for planting in a commercial citrus orchard:—Washington Navels, Valencia Late, Mediterranean Sweet, Lisbon Lemons, and Emperor Mandarins. These varieties yield the best crops, and are the most profitable for marketing.

COBRAM (VIC.).

A Progressive Fruitgrowing Centre.

One of the most progressive citrus growing districts in Victoria which was visited recently by the Executive of the Victorian Central Citrus Association, is that of Cobram, situated 155 miles from Melbourne, on the River Murray. The majority of the citrus groves are from three to seven miles from the Cobram railway station, on both sides of the river. The area devoted to fruitgrowing is approximately 1,500 acres. Of this total about 700 acres are planted to Oranges and Lemons, the balance being under deciduous and vine fruits.

The citrus areas are in all stages of growth, varying from 30 year old to newly planted. Some idea of the growth and productivity of the district can be noted from the fact that in 1922, 32,042 cases of citrus fruits were sent by rail to Melbourne, and other markets, whereas in 1921, only 9,840 cases were marketed. It must also be borne in mind that only one-eighth of the area planted is in bearing. Within the next few years it is anticipated that about 200,000 cases of citrus fruits will be harvested annually.

In addition to the foregoing 1,019 tons of deciduous fruits were sent by rail to Melbourne during the months December to May, and this will probably be doubled in the near future. The largest deciduous orchard is that owned by Messrs. P. Pullar and Nephews, about 120 acres planted to Peaches and Pears. There are also two large vineyards at Cobram. Messrs. Graham Bros.' of Rutherglen (Vic.) property at Seven Hills, about seven miles from Cobram, consists of 185 acres of Zante Currants, and 16 acres of Sultanas. The average crop from this vineyard, which is sent to Rutherglen for wine making purposes, is from 300 to 400 tons. The water for this property is brought by private pumping plants from the river—a distance of about seven miles.

Seppelts Ltd. have about 300 acres planted to young vines for distilling purposes, about three miles from the Cobram railway station. The company has also acquired another 500 acres, which will shortly be planted to vines and citrus. It is also proposed to erect a distillery on the property.

Visits were paid by the citrus delegates to the orchards of Messrs. R. A. MacPherson, F. M. Quick, and T. H. Scott. Other growers in the district, in addition to those already mentioned, are Messrs. Brentnall Bros., Tuck and Wadeson, P. R. Quick, M'Clusky, Johnson, Tucker, Cotton Bros., M. Keamy and others. The majority of the properties owned by these gentlemen are irrigated by means of private pumping plants, drawing water from the Murray. In a number of places the water is applied by the Nunan pipe sytsem of irrigation. Some of the groves obtain their water through the Cobram Irrigation Co., which has a large pumping station.

The orchards throughout the district are well kept, and some excellent crops of fruit have been taken off the trees. Mrs. R. A. MacPherson's grove, which is managed by Mr. P. Rossiter, and known as Ngawee, contains about 37 acres planted; the bulk of trees are nine-year-old; 12,000 cases of Oranges were harvested last season. A number of the nine-year-old Late Valencia trees yielded 12 cases to the tree, the best yield from one tree being 17 packed cases. The manager recognizes the necessity for

feeding the ground

after taking such an excellent crop, and is manuring heavily this year. He intends applying 18 tons of blood manure, 12 tons of super., and 2 tons of potash, half in the autumn and half in the spring. The oldest grove in the district is that owned by Mr. T. H. Scott —30 years old.

The Cobram growers are to be congratulated on their progress, which is all due to their own enterprise and initiative. When the scheme now being investigated by the Government to irrigate thousands of acres of fertile land adjoining Cobram from the Hume Reservoir is completed, this district will go ahead with leaps and bounds. The president of the local association is Mr. P. R. Quick, and the secretary Mr. D. Guthrie.

Australian Navels in New Zealand.

A grower in the Riverside (Vic.) district reports having netted 15/-, 16/- per case for 400 cases of Navels, forwarded to New Zealand during the season just closed. Other growers also report good returns from the same country. There is undoubtedly a profitable market waiting in New Zealand for good-quality Oranges. Inquiries have been received from Dunedin for 10,000 navels and 10,000 commons for next season. This is from one port alone, and there is no reason why other big centres, such as Wellington, Auckland, Nelson, Otago, Christchurch, should not take a similar quantity, and thus relieve the market of perhaps 100,000 cases.

DISTRICT EXPERIMENTAL PLOTS.

Proposals by the Government Citriculturist.

In a recent tour of the Victorian citrus growing districts, Mr. S. A. Cock, Government Citriculturist, addressed growers in the various centres and outlined the proposals he had submitted to the Director of Agriculture for carrying out district experiments and investigations.

He proposed that a small allotment of about one acre be set aside in each district for conducting experiments in pruning, drainage, irrigating, &c., taking into consideration soil, water and climatic conditions. Experiments will also be conducted in regard to fertilization, manuring, and the general question of pest control.

The plots would be under the control of the Citriculturist, who would visit the districts periodically.

The commercial aspect will be considered, and the returns from the crops marketed will go towards the general upkeep of the plots.

In the event of the returns not being sufficient to pay expenses it is proposed to ask district growers to make up the difference in ratio to the acreage planted.

Mr. Cock also intends asking the Government to devote £300 per annum to assist the experiments.

It is hoped that growers will come forward and help the scheme, which is a step in the right direction. Some growers have already offered to make a portion of their property available for experimental purposes.

KEEPING QUALITIES OF AUSTRALIAN ORANGES.

Further evidence of the keeping qualities of Australian Oranges is afforded by the experience of Messrs. Watson Bros., of Perricoota, on the Murray. They forwarded to the V.C.C.A. a dozen Oranges, which formed portion of a case packed four months ago. These Oranges were allowed to sweat for eight days to enable the skin to toughen, they were wrapped in waxed papers, packed in a case and kept in the office. When the case was opened there was only a 10 per cent. waste. Messrs. Watson Bros. packed a second case at the same time, but did not wrap the fruit. This case, when opened after four months, showed a similar percentage of waste, but the Oranges did not present the same saleable appearance, having shrunken somewhat.

Similar experiences are reported by other citrus growers. The question is asked why Oranges could not be landed in London in cool storage?

MURRUMBIDGEE IRRIGATION SCHEME.

Progress During Year 1922.

The Minister for Agriculture (Captain F. A. Chaffey), who is also Chairman of the Water Conservation and Irrigation Commission, has supplied particulars relative to the progress of the Murrumbidgee Irrigation Scheme during the year just closed. During that period 355 farms were granted, 223 of which were taken up by returned soldiers.

The total number of farms held on the 31st December, 1922, on the Murrumbidgee Irrigation Areas was 1,946, comprising a total area of 116,172 acres. The figures for the corresponding date in 1921 were 1,591 farms and 92,244 acres.

From a production standpoint the activities of the various enterprises on the Murrumbidgee Irrigation Areas are increasing in importance to the State.

During the financial year ended the 30th June, 1922, the following amounts were paid to settlers for produce from their farms:—

Butter Factory	£47,089
Canning Factory .. and	£21,291
Bacon Factory	£6,681

Since the first farm was made available in 1912 the factories established on the Murrumbidgee Irrigation Areas have paid to suppliers in round figures no less than £370,500.

A conservative estimate of the value of fresh fruit despatched from the Areas is put down at £71,950, in addition to which is to be added the estimated value of dried fruit, viz., £35,700. Under all headings of production, including poultry, dairying, and horticultural products, the value for the period ended the 30th June, 1922, is estimated at £350,000.

So far as the financial side of the scheme is concerned, great improvement was shown during the last financial year.

Last year's operations show a substantial improvement over those of previous years, inasmuch as after paying all working expenses a contribution of £57,424 was made towards interest.

With few exceptions the improvement in trading results have been general, and for the period under review an improvement of £155,000 was effected. Excluding interest the profit for the year on trading operations amounted to £18,000.

Freight paid to the Railway Department during the last financial year amounted to over £107,000.

Quite a number of reforms have been effected and other reforms in the interests alike of settlers and taxpayers generally are contemplated. These, however, require amending legislation, and a Bill has been drafted which is being carefully reviewed, and when Parliament again meets it is hoped the provisions of this Bill will become law.

Western Australia.

TOODYAY (W.A.).

Messrs. Lukin Bros., Toodyay, W.A., write as follows:—

This season promises to be an exceptionally good one in regard to stone fruit, vines and other varieties, with the exception of Apples, which, this year, are poor. Pear trees are bearing well and early Apricots have brought top prices in metropolitan markets.

The district grows practically every variety of fruits, but is especially suited for vines of all varieties and stone fruits. Sultanas and Currants are being cultivated widely, and there is a movement on foot to cut up the larger estates and bring closer settlement schemes to Toodyay for this purpose. The land, climate, and situation are eminently suited for viticulture, and experts prophesy Toodyay to become better than Mildura. There is a total absence of anthracnose.

Last season's crop of vine fruits was heavy and this year is equally promising. Stone fruits this year are better than were last year's, while Apples were good last year.

There are hundreds of acres of good, rich fruit lands awaiting settlers in the Toodyay district, which can be bought comparatively cheap. Clearing, where needed, is very light, and present owners will sell from £2 to £10 per acre, while specially picked lots range up to £15 per acre. This land is equal to anything in Australia, but it is only during the last twelve months that orchardists and viticulturists are waking up to this fact, and consequently many sales of properties have been and are being effected here. If any of your readers of the Eastern States feel "crowded out" there is a golden opportunity awaiting them in the Avon Valley.

The State Government has agreed to advance £200 toward the expenses of the State Fruit Advisory Board.

It is not the size of a man or the size of his business that governs his integrity, honesty or morality.

Orchard Tractor For Sale

Small, powerful, six-cylinder Engine, 3 in. bore, 4 in. stroke, only 54 inches high, 50 in. wide, 136 in. long, magneto, belt pulley, turning radius 11 feet, height to drawbar only 12 in., quiet operation, low price. Can be seen pulling 3-furrow plough. Write for particulars—"Tractor," care "Fruit World."

Sugar and Fruit.

(The Editor "The Fruit World of Australasia.")

Sir,—With reference to Mr. J. W. Bailey's letter under the above heading in your issue of December last, permit me to endorse his main contention, viz.:— "that the price of sugar does not make the huge difference in the cost of canning of their fruits" as the growers imagine, and that the sooner they realise this fact the better for their own interests.

The whole matter can be put in a nutshell, thus—In a 30 oz. tin of fruit there are about 3 oz. of sugar. This is equivalent to 2¼ lbs. of sugar in a dozen tins. The present retail price of best Australian refined sugar (admittedly unsurpassed in quality in the world) is 5d. per lb. (but it must be remembered that the canner pays less than 5d. per lb. for his sugar). So the total cost of that Australian sugar in a dozen tins is 11¼d., or say, 1d. per tin. This absolutely bears out Mr. Bailey's warning to the growers to analyse certain statements so frequently put before them.

Furthermore, it is clear that a total remission of the present duty on sugar, viz., 1d. per lb., would not materially help the canned fruit industry. I cannot for one moment admit that the present import duty is sufficient to keep out foreign sugar, but assuming for the purpose of this argument that it is, then it follows that a total remission thereof would mean that the sugar in a dozen tins would cost 9d. instead of 11¼d., as shown above. Or, if you like, assume a permanent low level in the world's market with best refined sugar obtainable at 3d., equal to 6¾d. worth of sugar in a dozen tins. The saving, therefore, runs from 2¼d. to 4½d. per dozen tins. How this item can be made the main factor in a proposal to reduce the selling price from 13/- to 8/- or 9/- per dozen passes my comprehension. And yet, equally with Mr. Bailey, I understood that this was the underlying argument of the article in your issue of November 1st.

I cannot see that your reply to Mr. Bailey's letter meets the main points raised by that gentleman. It is in the hope that you will put this simple statement before your readers that has induced me to pen this letter.

The jam figures can easily be calculated on a similar basis per dozen tins, but the specific issue raised here was canned fruit, and I have, therefore, confined myself to that aspect of the case.—Yours, &c.,

G. H. PRITCHARD,
Secretary Australian Sugar Producers' Association Limited.
Brisbane,
13th December, 1922.

Mr. Pritchard, as the energetic secretary of the Australian Sugar Producers' Association, has never shown any consideration for the fruitgrower, and it is not surprising that he supports the extraordinary view "that the price of sugar does ont make the huge difference in the cost of canning of fruit" and that he proceeds to argue that a total remission of the present duty on sugar, viz., 1d. per lb., would not help the fruit industry by more than 2¼d. per dozen. The duty imposed by Parliament is certainly 1d. per lb., but Mr. Pritchard knows quite well that the existence of the present embargo entirely prohibiting the importation of all foreign sugars makes the duty whatever it is, non-effective. It is the brand of sophistry that deceives no one. The following table will show how much sugar affects the cost of canning fruits—jams and preserves:—

Pre-war Cost of Sugar.	Present Cost of Sugar.	Pre-war Cost of Fruit.	Present cost of Fruit.
£18 per ton.	£39/18/6.	£15.	£10.
Pre-war Cost of Sugar in 1 doz. 2-lb. Pres. Fruits.	**Present Cost of Sugar in 1 doz. 2-lb. Pres. Fruits.**	**Pre-war Cost of Fruit in 1 doz. 2-lb. Preserved Fruits.**	**Present cost of Fruit in 1 doz. 2-lb. Preserved Fruits.**
6d. per dozen.	1/1¼ per doz.	3/6	2/4.
Pre-war Cost of Sugar in 1 doz. 2-lb. Jams.	**Present Cost of Sugar in 1 doz. 2-lb. Jams.**	**Pre-war Cost of Fruit in 1 doz. 2-lb. Jams.**	**Present cost of Fruit in 1 doz. Jams.**
2/4 per doz.	5/2 per doz.	2/- per doz.	1/4.

For every ton of sugar used in canned fruit, 20 tons are used in jam making.

These figures should make even the conscience of a sugar grower, miller or secretary uneasy, for in 1914 the cost of sugar in every dozen tins of 2-lb. jams was 2/4, against 2/- for fruit. To-day, for the same article, sugar costs 5/2 and fruit 1/4. The present sugar cost of 1 doz. each of 2-lb. pres. fruits and 2-lb. jams is 6/3¼, and the present fruit cost of the same goods is 3/8. The pre-war costs were 2/10 and 5/6 respectively. The fruitgrowers have been reduced from 5/6 to 3/8, the sugar growers have been raised from 2/10 to 6/3¼. Could more convincing and positive testimony be furnished that one section of producers has been enriched at the expense of the other—one section pampered, the other almost destroyed?

THE SUGAR INDUSTRY.

Fixed Prices and Continuance of Embargo.

Reduced Fruit Prices Suggested.

A conference convened by the Queensland Government of representatives of all branches of the sugar industry, was held at Brisbane on January 23. Mr. Gillies, Minister for Agriculture, presided.

The Premier (Mr. Theodore) submitted a proposal for a five years' sugar pool; the Commonwealth Government to prohibit the importation of sugar, except to make good any Australian shortage; refined sugar to be retailed at a price not exceeding 4½d. a lb. in the metropolitan towns, and that an agreement be made between the pool and the refiners for the refining and the distribution of sugar.

The Premier, continuing, said the duty of £9/6/8 was not sufficient to enable the industry to be carried on with a reasonable degree of prosperity. Milling and refining costs would have to be reduced. **The cost of fruit would also have to come down.**

Mr. Powell urged the renewal of the present agreement for another five years.

The Premier's proposals were subsequently carried with slight amendments, including the raising of the fixed price to consumers to 4¾d.

ABOLISHING COMPULSORY ARBITRATION.

The Single Purpose League, which has for its object the abolition of compulsory arbitration, has issued a manifesto setting forth a system in substitution of compulsory arbitration. This is with the object of removing the stigma that the Single Purpose League was destructive and lacking in a constructive policy.

The Single Purpose League states that the system of voluntary conciliation in force in Canada has been proved to be fundamentally sound, and is far ahead of the experimental legislation which Australia has proved to its cost to be unsatisfactory.

Cease to advertise, and it will not be long before competitors will sprint ahead, and then it will soon be in the air that you are becoming a back number. When that does happen, it will cost you more than all you have saved by your ill-advised economy and deluded self-confidence to regain the ground you have lost.

Society is built upon trust, and trust upon confidence of one another's integrity.

Fruitgrowing under Irrigation

Drying the Sultanas

The Citrus Industry :: Practical Hints

(By Our Special Correspondent.)

THE UNSETTLED WEATHER experienced during the latter end of December and the beginning of January caused great inconvenience to the **Apricot** growers. The weather on the whole was cool and the fruit ripened slowly and dried equally, if not more, slowly. Thunderstorms were frequent and were generally preceded by heavy dust storms, which coated any fresh fruit just from the sulphur box with dust where the fruit was exposed.

At the time of writing (middle of January) the weather is more settled and the finishing-off of the drying of the Apricot crop is being done under ideal conditions.

The Early Crawford **Peaches** and the **Nectarines** are now commencing to ripen, and by the time these notes appear in print will be practically all gathered.

The **Currants** are coloring up nicely, and from appearances throughout the settlements, the crops are not only heavy, but the fruit is of fine size. Given careful attention and good drying weather the quality of the Currants placed on the market this season should be equal to any, and better than, many previous packs.

Growers are recommended to take great care in harvesting and drying this fruit, remembering that much of the crop is exported each season, and has to compete with the cheaper grown fruit produced around the Mediterranean. If we wish to obtain good prices and gain the confidence of the overseas buyer, we must **standardise our grades and place in the packages the best quality article.**

The fruit should be a rich black color when gathered, and it should not be cut from the vine until the must registers **at least 13 degrees Baume,** a higher density is even better. The greater the density, the more sugar the fruit contains, the better the quality of the finished product, and last, but not least, the fruit dries out heavier, i.e., it takes a lesser quantity of fresh fruit to produce one pound of dried.

Drying the Sultana.

So much has been written on this subject from time to time that one hesitates to expound further on the matter, but these lines may reach some one who is in need of the information.

The Sultana Grapes will be ready for harvesting towards the latter end of February, the fruit should not be picked before the must will register 12½ degrees Baume—this should be considered a minimum reading. Where possible picking should not be commenced until 13 to 14 degrees is reached.

The Australian Sultana has been declared by competent judges to be the finest throughout the world. This being so, we should jealously guard our fair name and endeavour to place upon the markets only high-class fruit; here again the **fixed standards** for the various grades are necessary

Having gathered the fruit it is taken to the dipping tank, where it is immersed in boiling lye, the fruit having been placed in perforated buckets prior to dipping, to allow the free passage of lye through the fruit

The strength of the lye varies according to the nature of the fruit, and to the temperature of the solution. A boiling dip is usually weaker than a dip used at a lower temperature. Generally speaking

a boiling dip

is the best for most purposes. The strength of the dip varies over a wide range, at times to each 18 gallons of water a pound of caustic soda may be added or the water may be increased to 30 gallons and for some fruit even a weak lye is used.

Amber colored fruit requires a stronger dip or a longer immersion than does the light green colored fruit, the former is usually found on the outsides of the vines exposed to the rays of the sun, the skin is consequently tougher than where the fruit is shaded.

The dip should be made up to about one pound of soda to each 25 gallons of water, it should then be tested by immersing a bunch or two of Grapes in it for a couple of seconds. This fruit is then exposed to the air for a minute or so; should minute cracks appear around the stem end of the berries the lye can be considered to be the correct strength and dipping may proceed. Should large splits and cracks be seen over the fruit, one may feel sure that the lye is over strength, and more water should be added until the desired cracking results when the lye is again tested.

The over cracking of fruit allows much of the rich sugary juice to escape, thus making the fruit more or less sticky and not only does this detract from its appearance but also renders the proper stemming and grading of the fruit difficult.

When the lye is tested and no cracks can be discerned, more caustic soda should be added until the desired result is obtained.

After dipping the fruit in the lye some growers pass it through a cleansing bath of cold water to remove as much of the soda as possible. The majority of growers do not wash the fruit but place it straight on the drying racks from the dip. Where the fruit is washed, the wash water needs to be frequently replaced, otherwise its object is defeated, as the water becomes more or less impregnated with caustic soda washed from the berries.

The fruit is spread fairly thinly on wire netting racks or wooden trays and left exposed to the sun in order to produce a bright golden colored Raisin.

Before spreading the fruit on the racks, hessian sheets are placed under them to catch the falling berries. These loose berries should be removed from the sheets the same day as the fruit is spread on the racks, as they tend to roll together in a dense mass towards the centre of the sheets, and if left for any length of time will in many instances commence to mould. The loose berries are put on wooden trays and placed in the sun to dry.

Should wet weather intervene, the trays must be stacked and covered, and the racks must be sheeted up to keep out the rain. The fruit should be again opened up as soon as conditions permit.

The fruit is allowed to remain on the trays and racks until nearly dry; it is then placed on hessians and finished off. Should the nights prove dewy, as often happens towards the end of the drying season, the hessians should be folded over the fruit each evening to protect it from the dew, and opened out in the morning.

Dry the fruit thoroughly; damp fruit when packed will not keep, but moulds in the containers.

The Citrus Industry.

Mr. Gerald Mussen (Chairman of the Victorian Central Citrus Association), and Mr. J. A. Parkes (Secretary of the South Australian Citrus Association), have been making a tour through the South Australian Irrigation Areas in connection with citrus matters.

Mr. Mussen is an optimist of a high order in relation to the future of the citrus industry. He declares with no uncertain feeling that if asked, "What to Plant," he would advise, Citrus.

He further states that the quality of the Australian Orange will more than hold its own on the London market. Large markets will be found in America, largely in Canada. New Zealand too, would take a lot of the Australian Oranges in the future.

The history of the year-old Victorian Citrus Association was briefly traced, and Mr. Mussen congratulated the South Australian growers along the Murray upon combining into an Association, and stated that it was mainly due to the success of the organisation that Victorian growers formed their Association.

The methods of control of supplies to the Melbourne markets was also dealt with, and it was stated that through the control of supplies £40,000 had come to the growers, which would have not done so if the organisations had not been in existence during the past Orange season.

Personal.

Mr. O. E. Halliday, who has been on the staff of the State Irrigation Experiment Orchard, Berri, River Murray, South Australia, for the past five years, first as foreman, then as Assistant-Manager, has been selected from a large number of applicants as manager of the new experiment station in the Dawson Valley in Queensland.

In Mr. Halliday, Queensland is securing a capable man, well versed in the various methods practised in the growing of fruit and fodders under irrigation.

Prior to accepting the position on the Berri orchard Mr. Halliday had experience of fruit and vegetable growing in the Adelaide hills, then in fruit and fodder growing under irrigation at Renmark.

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CYGNET

At the January meeting of the Berri branch of the Agricultural Bureau a resolution was passed expressing the regret that the district was losing such a valuable man, but congratulated Mr. Halliday on his appointment and wished him success in his new sphere. South Australia's loss was Queensland's gain.

"Help us to help you" is the Victorian Railways' slogan. In their "eat more fruit" campaign, J. H. Lang (Harcourt) suggests that the slogan should be "help us (the fruitgrowers) to health you."

Queensland

Seasonable Notes and Information

Budding, Spraying, Manuring
Is the Agricultural Council too Ambitious?

(By Our Correspondent.)

MOST FRUIT AREAS have been favoured by generous rainfall, effecting an all-round improvement. During any dry spells orchard irrigation is freely discussed, but only adopted in the drier parts of northern areas.

The Dawson Valley irrigation area is intended to demonstrate what can be accomplished by general irrigation, and an officer has been appointed to deal with the fruit branch.

The **Grape crop** is in good condition and prices are satisfactory. The vines have been kept free from Downy Mildew by applications of Bordeaux mixture. A strength of 4—4—40 ensures complete immunity.

Stanthorpe district is supplying Pomaceous and stone fruit in quantity, which, though not as free from fruit fly larvæ as desirable, is much sounder than last summer crop.

An up-to-date **packing shed** was recently officially opened by the Chief Fruit Instructor, Mr. J. M. Ward, who incidentally mentioned that Mr. Rowlands (Tasmania) would shortly be appointed "packer" to the Queensland department.

The Pineapple crop, now maturing, is a heavy one, the disposal of which will rest with the growers who decided, by a large majority, against the proposed pool. The situation at Beerburrum Soldiers' Settlement is indicated in a request for endowment by the State of 1/- per case, a similar amount having been paid last year.

Placing settlers on most indifferent land and subsidising their crop is a poor advertisement for the State.

The prospects for ensuing **citrus crop** vary in different districts. On the Blackall Range the Orange Bug has caused a very heavy drop in the fruit. By united action against the pest in its early stages, when their coverings are soft and readily injured by sprays, control is readily attainable.

Growers have appealed to the Government for advice and assistance to eradicate the bug. The subject is now being investigated by the Entomologist.

In the Wide Bay district, the excessive injury, causing the fall of young fruit and at later stages the roughening of the skin, has been investigated by Mr. Tryon (Government Entomologist) who attributes the origin to a small red mite against which he recommends applications of lime sulphur solution.

Budding and Bud Selection.—The season is opportune for **working over inferior varieties by budding.** This revives the subject of **bud selection.** To those who work their own trees, the subject is important, but at least 99.5 per cent. of the trees planted are worked by nurserymen, proficient in their profession.

The necessity for

good buds of typical varieties

from sound productive trees is universally recognized, but it is erroneous to suppose that the unprofitable trees which are found in varying number in almost every orchard, are unprofitable through any lack of bud selection.

The planting of unsuitable varieties (those not adapted to the immediate local conditions, or defective in some important detail) is frequently the cause: unsuitable stocks also largely contribute.

The influence upon each other of stock and scion are such that apart from the possibility of disease being transmitted with the bud or graft, the vigour and general **suitability of the stock** would appear to be at least an equally important feature.

Seasonable Cultural Work.

Spraying.—In **citrus orchards** and **Banana plantations**, general cultivation, weeding, &c., will provide employment during remainder of summer months.

Where scale is present, spraying should not be neglected. Miscible oils are mostly in favour.

In the drier areas, aphides are apt to get the upper hand. Various formula are recommended, amongst them being a weak solution of cyanide, which destroys by fumes such insects as may escape the reach of the liquid.

Manuring.—In relation to manuring fruit trees, there is on account of the diversity in nature of soils, occasion for variation in the contents.

Special mixtures are offered by the manufacturers or agents for the different fruits—Bananas, citrus, vines, &c.—with the proportion of nitrogen, phosphoric acid and potash varied according to the variety. To some extent

nitrogen can be added

by growing and ploughing in green crops; Cowpea is favoured in some districts, but in the coastal areas Mauritius Beans are most satisfactory. They rapidly provide abundant foliage, to the detriment of weed growth, which would otherwise be in evidence.

The turning under of the green crop prior to spring growth is favoured for general fertilizing, and amongst evergreens another application about mid-summer is desirable.

With **Pineapples**, early spring application meets all requirements, whilst **Bananas** are much benefited by a late summer (as well as spring) dressing. A high percentage of both nitrogen and potash is essential in the case of the two latter.

In all instances where a complete soil analysis is not available, or where general indications evidence a shortage, a complete fertilizer is recommended (Stanthorpe district being naturally endowed with potash, requires little or no addition of that material).

In regard to the effects of fertilizers it is well to recognize that the most important initial feature is to ensure a **liberal supply of humus** in the soil, otherwise the beneficial effect will be only partial.

Agricultural Council.—This is a composite body composed of representatives from all the various sections of primary production. But does it justify the heavy expenses incurred for salaries, &c.?

The Southern Queensland Fruitgrowers Ltd. hitherto have practically controlled the situation. Worked upon sound commercial lines, from an unpretentious beginning, much good work has been accomplished by this society, which promised to become the sole controller of the State's fruit in transport, marketing, &c.

Growers must recognize that the State Government finances the Council for the first twelve months; later, it is proposed to draw the necessary income from the produce handled.

The State Government has liberally advertised the failure of official control in several industries, and the fruit industry generally has been in close contact with Federal sugar control.

It has been reported that the Council's ultimate object includes the control of the Agricultural Department. In the meantime, there may possibly be some evidence of a modest appreciation of the fruit industry. A very wide margin exists for such evidence.

[Editorial Memo.—Our correspondent has touched upon an important matter of policy in the foregoing paragraph relating to the Queensland Agricultural Council, which is now constituted under an Act of Parliament. Fruitgrowers and primary producers generally in other parts of Australia are keenly watching the developments in connection with the methods there adopted for organizing the primary producers. Correspondence from our readers is invited on this subject.—Editor.]

Redland Bay (Q'land).

Mr. James Collins, Redland Bay, Q'land, writes as follows:—

The general orchard work in this district at this time of the year comprises horse-hoeing to keep down the weeds, which generally are very prolific, especially summer grass and Pigweed.

The marketing of the **Pineapple crop** was in full swing during January, while the canning factories absorbed a fair percentage of the crop; very large quantities were sent to the Sydney and Melbourne markets. The crop is not estimated to be a heavy one, nor quite as early as usual. Citrus growers will be busy either spraying with red oil or cyaniding to keep down insect pests, and the Maori, which usually is very bad about this time of the year will have to be kept in check with "lime and sulphur" spray at about 1 in 30.

Crop prospects are fair, citrus fair to good, Pines fair, Custard Apples promise to be good.

No summer pruning is done here, beyond rubbing out some of the centre growth in Custard Apples, if it should happen to be very prolific, which sometimes happens if the trees are young; no thinning of fruit is done.

Interplanting of varieties for pollination purposes is done only where Navel Oranges are grown, but not many of this variety are grown, most growers not being successful in getting the trees to bear anything like a fair crop through lack of knowledge of the treatment needed to make them bear well.

Planting Trees.—Much variation exists here in the distances between trees. They range from 15 to 30 ft. square, but it is generally recognized now that citrus should not be planted closer than 24 ft. square, and Custard Apples from 24 to 30 ft. square; Custard Apples will attain a diameter of 20 ft. or more in about ten years. The width of headlands is only sufficient for the purpose of turning round horses and implements.

Redland Bay, for twenty years or more, was noted for its Bananas, most of the land was then under that crop; through various causes they became unprofitable, then Pineapples, to a great extent, took their place; now, through pests, etc., Pineapples are giving place principally to **Custard Apples.** No other district in Australia produces such quantities of this fruit. This district is widely known as the home of the Custard Apple; it was here the first fruit was grown commercially, and it justly holds its high reputation for the quality and quantity of fruit produced.

Citrus Culture.

Request for an American Expert.

A deputation of North Coast citrus growers recently waited on the Minister for Agriculture (Mr. Gillies) requesting the appointment of a citrus culture expert of the industry in the State. They did not want to overlook an Australian with the necessary qualifications, but in view of California being most advanced in citrus culture, the suggestion was put forward that a man from that part, with a University education, and with the necessary scientific knowledge, should be obtained in order to bring the industry right up to date. The expert they desired was a man to whom they could go for advice and confidently follow it. He would need also to be a man well versed in marketing methods. As the Public Service Commissioner (Mr. J. D. Story) was in America, it was suggested that he should be asked to try and find the expert they required.

Mr. Gillies said he recognized the importance of the industry, and in view of the ravages of the Orange Bug, he thought something additional to what had already been done was needed. He would take to Cabinet the suggestion that Mr. Story should be asked to select a man, and if it was agreed to make the appointment a cable could be sent to Mr. Story.

Four-year-old Washington Navel Orange tree at Cairns, North Queensland.

Pomological Committee.

Valuable New Raspberry.

A meeting of the Victorian branch of the Australian Pomological Committee was held at Melbourne on January 22.

There were present: Messrs. E. E. Pescott (hon. secretary), J. R. Warren, A. F. Thiele, J. W. Lawrey, H. Alston ("Leader"), and R. E. Boardman ("Fruit World").

New Raspberry.—Specimens of a new Raspberry were submitted. This is known as Exton's Late Prolific. The Raspberry has a delightful flavour. It comes in (in the Kinglake, Vic., district), just when other Raspberries are finishing. The fruiting period is one month, which thus extends the marketing period of Raspberries for that period.

Exton's Late Prolific Raspberry is thirteen years old, and thus has completely passed its experimental stage. It has been grown commercially by Mr. Exton, at Kinglake, Victoria, for the past eight years. The growth is very strong, the canes run up to 7 and 8 feet high. An important feature is that they produce very few suckers, which is an advantage in a Raspberry. The fruit is produced right up the canes and not simply at the tips.

Mr. Exton, noticing the value of this Raspberry, has been steadily increasing his acreage until now there are approximately four acres under cultivation, from which regular crops are harvested.

The Victorian sub-committee is taking this new variety to the full committee, with the request that it be recommended for commercial plantings. The raiser has applied to the Nurserymen and Seedsmens' Association for the Association's gold medal.

Stark's Golden Delicious Apple.—Mr. J. R. Warren tabled a specimen of Stark's Golden Delicious Apple, same having travelled 2,500 miles in three separate journeys across America, and the balance of the journey to Australia through parcels post. The fruit was found to be in good order and condition; appearance very good and flesh firm. It has a remarkably small core. The flavour is not unlike that of the Delicious, while the Apple, in appearance, is like Grime's Golden.

A combination of names has therefore been arrived at in calling it Golden Delicious. It is entirely a separate Apple as regards parentage from the commercial Delicious variety. The Golden Delicious is protected by a stringent agreement between the distributors (Messrs. Stark Bros., of Louisiana, Missouri, U.S.A.), and purchasers. Particulars of the agreement between intending purchasers are set out in the January issue of "Fruit World," page 35.

This Apple was awarded the Silver Medal of the American Pomological Committee.

Regret was expressed that new varieties of fruits, proved and tested in America, are not permitted to be imported into Australia. America receives all the new and valuable Australian varieties.

BROWN HEART IN APPLES.

Storage Problems Investigated.

Some months ago research work on Brown Heart and problems of Apple storage was initiated by Professor Flynn, and carried out by Mr. F. W. Wakefield, in collaboration with Mr. Piggott, M.H.A. (manager of the Port Huon Fruitgrowers' Co-operative Association). After much tedious experimental work they have now reached an interesting stage and provide a basis for practical control of Apple shipments.

An ingenious apparatus has been designed by Mr. Wakefield. It is a small cabinet which is in electrical communication with all parts of the hold at the same time, and may be adjusted to a critical range of conditions of temperature and CO_2 in the atmosphere of the holds. Fluctuations beyond these will cause an alarm-bell to ring; an indicator shows the part of the shipment requiring attention, and a record is marked until the conditions in the hold are re-adjusted. This record, which may be under lock and key, provides a story of the treatment the fruit receives during transhipment.

Sir Henry Jones and the Premier (Hon. J. B. Hayes) are now interested, and have agreed to co-operate with Mr. Piggott in providing funds to further the researches in the interests of the fruit industry. Mr. Kneen, the manager of the Commonwealth Government shipping line, is also in touch with the matter, with a view to testing the apparatus for use in the Commonwealth ships.

Exton's Late Prolific Raspberry. Spray, 19 in. long, with 49 fruits.

The Viticultural Industry and the Phylloxera Menace

Castella earnestly urges planting resistant stocks

Now is the time for working the "Yema" Graft

THOUGH VITICULTURE IS IMPOSSIBLE without Phylloxera-resistant stocks in phylloxerated districts, their importance is not sufficiently realized in vine districts which are fortunate in being as yet free from the insect (states Mr. F. de Castella, Victorian Government Viticulturist). **Yet this pest must ultimately spread to all parts of Victoria and the other States.**

Salvation lies solely in grafting on phylloxera-resistant stocks. Though it does not cost much more to establish a vineyard on resistant stocks, many growers in clean areas prefer the sword of Damocles, in the shape of liability to destruction by the insect, to this slight extra expense.

Should there ever be an outbreak of phylloxera in districts or States as yet free from the pest, there will be such a tremendous rush for resistant-stocks that it will be impossible to meet the demand for two or three years.

In the new vine-growing soldier settlement at Red Cliffs, near Mildura, an area of 30 acres has been planted with American mother vines, from which cuttings are taken for growing into phylloxera-resistant rootings, on which desired varieties may be budded or grafted.

So far the phylloxera districts have been confined to certain areas in Victoria. Though phylloxera is present it is no longer a menace, as the vineyards have been successfully reconstituted on phylloxera-resistant stocks.

If a resistant vineyard be established with due regard to a few cardinal points, financial results equal, if not superior, to those obtained from ungrafted vines can confidently be relied on. Briefly those points are as follows:—

1. Absolutely suitable soil. Though good results may sometimes be obtained on fair, or even mediocre, soils, it is far better policy to choose only the very best.

2. Proper preliminary preparations—subsoiling to a depth of at least 18 inches, and preferably two feet. The value of such preparation is now thoroughly recognized in unirrigated areas, but less so in our irrigated areas. Yet even under irrigation subsoiling pays. It enables less water to be used: the golden rule to be "increase cultivation and reduce water." Resistant stocks need deep preliminary preparation of the soil much more than ungrafted European vines.

3. Due attention to adaptation and affinity. Only stocks thoroughly suited to the soil and to the scion variety, the fruit of which is wanted, should be selected. These are readily obtainable.

4. Recognition of the vital importance of having vines with perfect unions.

5. Due attention to all cultural operations, whether of soil or vine, as well as control of insect and fungus pests.

6. Reduction of the yield by somewhat severe pruning at the first two vintages—particularly the first one.

7. Due attention to manuring.

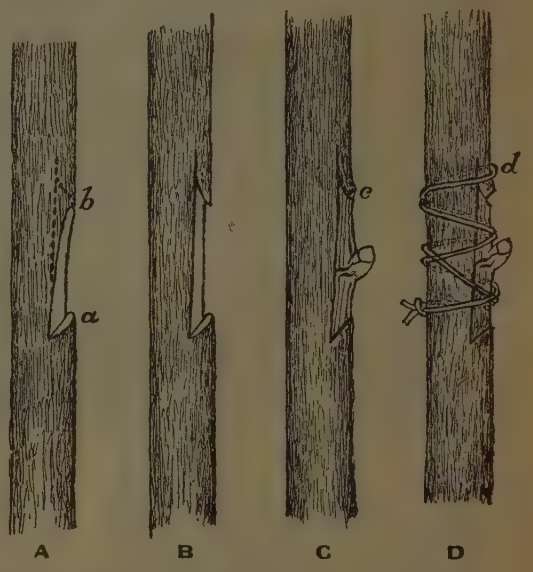
Propagation of the Vine.

The Victorian Department of Agriculture conducts a vine nursery at Wahgunyah, where resistant stocks are propagated and grafted for sale. The methods by which vines are established on phylloxera-resistant stocks are:—

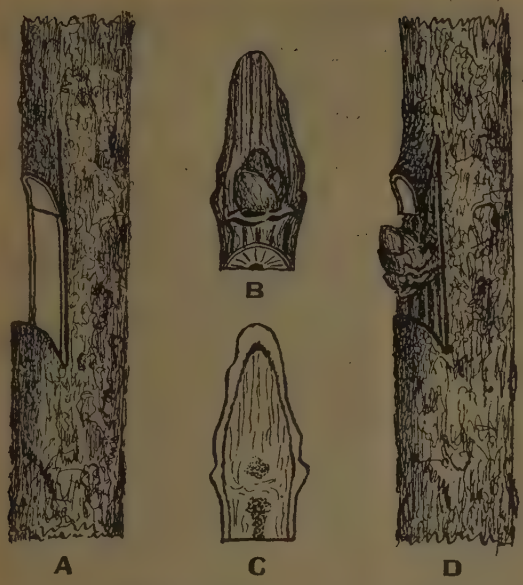
1. Field grafting, which is the older method. The vineyard is planted with ungrafted resistant vines. These are subsequently grafted with the fruit-bearing varieties, either in spring in the ordinary way, or according to the method known as the "Yema," or summer-bud, graft, which has been extensively applied of recent years with remarkably successful results.

2. The vineyard may also be planted with previously-grafted rooted stocks, known as bench grafts, since the grafting is performed at a bench or table. The executed grafts, packed in cases with seaweed, are next callused in artificial heat (80 degrees F.). After three weeks the union is complete. The grafts are then hardened off and planted in a nursery. Eight months later the grafted rootlings are lifted and sold to intending planters.

Young resistant vine in February, six months after planting as an "ungrafted rootling." The Yema graft has just been inserted at A, and protected by a mound of loose soil about 12 inches high. Scale of inches shown on left of picture.



The Yema Graft.—The Rutherglen Method—A and B show the four cuts which prepare the incision in the stock; C, scion bud placed in position; D, method of tying.
—Illustrations on this and opposite page from Bulletin No. 35, Department of Agriculture (Vic.).



Mr. Rounce's modification of the Yema Graft —A, preparation of stock; B, outer view of scion bud; C, inner view of same; D, the complete graft.

Grafting Calendar.

To each season of the year corresponds a special type of graft, or rather group of types, thus:—

August to November.—Ordinary spring grafting, mainly the cleft and the whip tongue. In every case knitting takes place almost immediately, and the scion commences its growth shortly afterwards.

October to December.—The various forms of herbaceous grafting, such as true budding (as practised on Roses, citrus, &c.), the flute graft and others.

December to April.—The "Yema," or summer-bud graft; the "Cadillac," and some other grafts, in which the scion knits very shortly after being fitted, but remains dormant until the following spring.

April to July.—The grafts usually practised in spring can be performed during these slack months. Knitting usually takes place soon after grafting, but the scion must await the following spring before developing of the foregoing. Spring and autumn (or late summer) are the most important seasons.

The Summer Bud or "Yema" Grafting of Vine.

The "Yema" is a summer bud graft, and is not a form of budding as the term is applied to Roses, citrus, &c., for the bud is removed together with a fair-sized fragment of the already wooded shoot and the current year's growth.

February is the best month for this work.

The stock is prepared to receive it by the removal of a similar shaped piece of wood by means of four cuts of the grafting knife. Into the gap thus made, the properly-cut eye is carefully fitted and securely bound with raffia. The cambium layers of stock and scion must correspond accurately.

When tying, the raffia must first be placed over the bud and bound round below it so as to ensure thorough contact at the base of the graft.

This graft is best suited for cases where there is but slight differences in diameter between stock and scion, as in the case where a one- or two-year-old rooted vine is grafted in the vineyard.

Young resistant vine in August, 12 months after planting. The stock was bud-grafted at b the previous February. The canes were roughly shortened during winter at c, c, c, c, to facilitate cultivation; they are further pruned in August at a, a, a.

The upper part of the stock is not cut off but continues its growth. The flow of sap which is thus maintained enables the union to take place under most favourable conditions. The graft knits, **but the bud remains dormant,** until the following spring, when, after the upper part of the stock has been cut back, it makes very vigorous growth.

As soon as the young shoots of the current year are sufficiently lignified to provide a properly-ripened bud, the operation may be performed. The bud is grafted on slightly above the level of the ground, which is then heaped up around it into a high mound to protect it from changes of temperature and desiccation.

The credit of introducing the "Yema" graft to Australia must be given to Mr. F. de Castella, who noticed this method being used in Spain whilst on a visit there in 1907, and realizing its importance to the Commonwealth, introduced the system on his return to Australia in 1908.

Watering a fortnight before grafting is beneficial, but watering soon after grafting is dangerous, and may even prove disastrous.

Some planters imagine that they can gain a season by planting already grafted vines. This is not the case.

Same vine as opposite seen in October or early November. The stock shoots have been severely stopped at t, t, and the shoot from the bud graft has been tied to the stake. The stock may be cut back at x, either in August-September, or as late as December. On no account should it be now finally cut back at y; this must not be done until the following winter, which will be the second one after the vine was grafted.

The latter cannot bear fruit before the third season from planting.

The field grafted vine commences to bear fruit the second season from grafting. As field grafting can be executed the season following plantation, it follows that such vines will commence to bear the third season from planting, or just as soon as the already grafted vines planted at the same time.

South Australia.

Nuriootpa.

In reply to questions, Mr. A. B. Robin, Nuriootpa (S.A.), writes:—

Orchard Work.—The principal orchard operations at this time of the year are harvesting the various fruit crops, drying Currants, Prunes and Freestone Peaches. During February the final spraying of the latest varieties of Apples should be carried out.

Spraying.—I think cleaner crops can be obtained by increasing the percentage of arsenate of lead. Codlin Moth is getting more difficult to control, even when the sprayer is in constant use. I am using this season from 6 to 7 lb. per 80 galls., and already find the effect more lasting. For Pears, about 4 lbs. to 80 galls. would probably be sufficient.

Manuring.—I consider that the best fertilizer for orchards is well-rotted manure, supplemented with a little super., but it is not practicable to use it except on a small scale. For most soils I recommend 3 to 4 cwt. high-grade super. per acre, drilled in during spring; and on poor, sandy, or limestone soil, about 1 cwt. sulphate of potash may be added to the super. Where growth is not vigorous, it is a good plan to apply 1 cwt. per acre of sulphate of ammonia.

Bud Selection.—Better trees and more uniform orchards would be the result of paying more attention to bud selection. Buds for propagation should only be taken from trees known to be regular croppers, bearing high quality fruit.

Canning Factory and Cool Stores Closed.—After operating for many years, the Nuriootpa Canning Factory, with cool stores attached, has been closed down for the season. A few years ago it was purchased by the S.A. Fruitgrowers' Co-operative Society to be run as a branch of their factory at Adelaide. Shares were taken up by nearly every fruitgrower in the district, besides trades people, &c., who are naturally disappointed with the result.

The situation is at present complicated, but, unless it develops favourably, strong efforts will be made to reorganise the local growers, with a view to gaining complete control of the factory, cool stores, and packing sheds, and running them under a pure co-operative system, and on proper business lines.

TASMANIA

Berry Fruits. Export.

District News and Notes.

(By Our Correspondent.)

The New Year was heralded by a spell of cold rainy weather. Heavy falls were experienced all over the State. This had the effect of retarding the ripening of the small fruits and held up all harvesting of early crops.

Fine, warm weather is now being experienced.

Small Fruits.—Growers of these fruits (Raspberries) will be relieved in the decision of the jam manufacturers not to reduce the price of this fruit, as was first intimated: 2⅞d. per lb. will give the grower a small enough margin of profit, but the proposed reduction to 1½d. would have meant a loss. It appears that the whole matter hinges on the anticipated reduction in the price of sugar. Jam manufacturers are now seeking a rebate on stocks of jam that may be on hand if this occurs, proportionate to the reduction, and have asked the Federal Government for a guarantee to this effect. Pending the receipt of this, the fruit is being processed, the grower receiving 2⅞d. per lb. as agreed.

Fresh, whole Raspberries delivered to the factory in punnets are being purchased at 4½d. lb. These are being utilized for canning purposes.

Fruit Pool.—Arrangements are now being made for the handling of Tasmanian fruit under "pool" conditions. The Commonwealth Inspector appointed to look after the Tas. section (Mr. H. Dyer) will arrange with the State representative, Mr. J. P. Piggott (manager of Port Huon Co-operative Association Ltd.), the details of the pool. A rigid inspection of fruits forwarded to the "pool" is to be enforced, and growers are requested to co-operate in the success of same by forwarding only good quality fruit.

Insurance on Last Season's Shipments.—The delay that is being experienced by growers in obtaining insurance money due on a number of last season's consignments is altogether unpardonable. The latest report from F. W. Moore & Co. Ltd., London, in regard to the Port Nicholson shipment (which was almost a total loss) is to the effect that it will be another three or four months before claims can be settled. Meanwhile the fruitgrower has to live and is, in a number of instances, finding it difficult to arrange for supplies for this coming season.

Representative on Sydney Markets.—Mr. Thos. Crockett, who for the past season has represented Tasmanian growers on the Sydney markets has, during the month addressed meetings of fruitgrowers in all districts, as to the general conditions ruling, recommendations, &c. There is no doubt that Mr. Crockett has given good service to the grower and has been earnest in trying to bring about improvements. It is to be hoped that his services may be retained for the coming season.

State Fruit Advisory Board.

A meeting of the Tasmanian State Fruit Advisory Board was held in Hobart on January 16.

Present: Sir Henry Jones (H. Jones and Co. Ltd.), T. J. Eddington (Bagdad), V. Shoobridge (Derwent Valley), A. Boatwright (Latrobe), H. D. Calvert (Geeveston), Neil Campbell, M.H.A. (West Tamar), V. Skinner (Huonville), J. P. Piggott, M.H.A. (Pt. Huon Fruitgrowers' Co-operative Association), A. Davies (Chairman, Cygnet), and the Secretary (P. H. Thomas).

Overseas Fruit Freights.—Correspondence was received stating the necessity for reducing freights below 5/- per case. On the motion of Messrs. H. D. Calvert and V. Shoobridge, it was decided to request the Premier to communicate with the Commonwealth Government and the Overseas Shipping Committee, stating emphatically that the industry could not survive unless oversea freight be reduced below 5/- per case. It was evident from the figures available that the production of fruit in Australia this season exceeds that of any previous year.

Financial Board and Fruitgrowers' Fund.—Decided on the motion of Messrs. Piggott and Calvert to submit to meetings of fruitgrowers a resolution from the Board affirming the necessity for providing legislation to give legal power to collect money for financing the Board, opening new markets, &c., provided that such charges do not exceed ½d. per case on Apples, 5/- per ton on small and stone fruits marketed, or 6d. per acre in accordance with the acreage of the orchard.

Insurance on Overseas Shipments.—Insurances were discussed, also the deterioration clause and the excessive rate of the latter quoted this season. The Board decided, by resolution, to recommend to the growers the collection of an amount not to exceed 1d. per case on all Apples exported overseas to create a fund to deal with the shipping companies re the carriage of fruit in lieu of paying insurance for deterioration, as it was considered the amount charged is too high and the business unsatisfactory, the ordinary insurance against total loss and break down to be continued.

It was further decided that the proposed fund be lodged with the Commonwealth Bank, trustees being Messrs. F. Heyward, H. D. Calvert, A. Davies and V. Shoobridge.

Interstate Markets.—Mr. Thomas Crockett, Tasmanian Fruitgrowers' representative in Sydney, addressed the meeting and stressed the need for concentrating sales amongst the selected agents.

Branding Cases for Export.—In reply to the letter from the Comptroller of Customs re marking consignee's distinguishing number on end of cases, it was resolved to await the decision of the Federal Government on the proposed new standards and methods of marking cases.

Woodstock.

Mr. S. J. Kellaway, of Woodstock, Tasmania, writes as follows:—

Orchard Practice.—By the beginning of February all tillage in the orchard has ceased. During the early part of the month the trees are examined, grub-infected fruit picked and destroyed. Preparations are also made for exporting, which commences about the middle of February, and from that time on the orchardist is fully occupied getting his fruit away.

Spraying.—With regard to the suggestion that more lead be used in power sprayers—so far as I know no alteration has been made in the quality of lead used, and I fail to see what advantage would be gained by additional quantities.

Manuring.—Manures which are found to be most valuable are Bonedust (fine), Super. and Sulphate Potash, in the proportions three, two, one, mixed and applied in the spring before ploughing.

Picking for Export.—Early picking judiciously done undoubtedly increases the production of a tree. It is actually a late thinning, the advantages of which are obvious.

Bud Selection.—I have not put bud selection to the test, although 35 years ago, when I worked trees, I always selected wood from the best yielding varieties. Judging by results obtained from selecting seeds of various kinds, I am firmly of the opinion that equal results may be derived from bud or wood selection.

Standardization Board.—At a recent meeting of the Apples and Pears Standardization Board, Mr. L. A. Evans presided. There were also present:—Messrs. Neil Campbell, M.H.A., H. D. Calvert, A. Davies, B. J. Pearsall, and the Government Fruit Expert (Mr. P. H. Thomas).

It was decided, in view of the fact that the Commonwealth authorities had held the proposed new grading regulations in abeyance, to allow the present State regulations to remain as at present.

NORTHERN TASMANIA.

Orchard Practice.

Eight Export Boats Calling for 250,000 Cases of Apples.

In reply to questions from the "Fruit World," Mr. Neil Campbell, M.H.A., of Winkleigh, Northern Tasmania, writes:

With regard to orchard practice for February, cultivation may now cease; arrangements should be finalized for the packing season, such as securing all necessary cases, nails, paper, strawboard, woodwool, &c. For the next few weeks, growers will be busy with the packing and despatch of English shipments.

Spraying.—I note a suggestion has been made that since the motor power spray pump has come into general use, you state it has been found that better results are obtained by increasing the percentage of arsenate of lead from say 4 lbs. to 6 lbs. per 100 gallons. In this district, we find a high percentage of arsenate of lead to be of advantage.

Manuring.—The method of manuring which gives the best general result, is to dress the land with lime in the summer, and in the autumn to sow with Peas and Oats, which should be ploughed in about September.

Export.—In picking fruit for export, we notice that the gross production of the orchard is increased as a result of early pickings for the English market, as the balance of the crop has benefited thereby. The Tamar districts will export about 250,000 cases this season.

Bud Selection.—Bud selection cannot be too strongly recommended.

Ships for the Tamar.—The most interesting event of this season is that definite arrangements have been made for eight overseas fruit boats to load in the Tamar River, thus saving the double handling which has hitherto been necessary.

Gerald DaCosta

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18 Stanley Street, Liverpool. Tel. Central 888. Telegrams, "Geracost, Liverpool."

Southampton Docks (Facing No. 45 shed), Tel. Southampton 2207. Telegrams, "Geracost, Southampton."

American Branch, 202-4 Franklin Street, New York. Cables, "Geracost, New York"

WEST TAMAR (TAS.).

Orchard News and Notes.

Mr. A. E. Bull, Clarence Point, West Tamar (Tas.), writes as follows:—

Leaf-spot fungus (Sphacropsis malorum) appears to be spreading in this district, and several orchards that were free are infected this season. A small area that was badly affected last season was sprayed with 4—4—30 Bordeaux, and while the fruit was very badly russetted, the disease was checked, and there are very little of the red spots to be seen this season.

Apples, except C.O.P. and Cleo., which are light, promise an average crop. **Pears** are mostly light.

Summer pruning is not advisable where woolly aphis is troublesome. In young trees we like to remove any undesirable shoots as early in the summer as possible, but beyond this, we do not care to do much summer pruning. Thinning out crop, especially in a dry season, is desirable, but the rush of other work usually makes it difficult in practice.

All our orchards are interplanted, for pollination purposes.

Our trees are planted 18 ft. apart, but on poor land, such as most in this district, we consider a rod apart, or even 15 ft., would be preferable.

Headlands are better if 20 ft. wide, to avoid accidents to trees when turning the implements.

Bad weather at the critical time made spraying for Black Spot very difficult, and as a consequence there is a fair amount on the Pears; but Apples are fairly clean.

Mr. W. Rowlands, fruit grading and packing expert of the Tasmanian Agricultural Department, it is reported, has accepted a more lucrative appointment in a similar capacity under the Queensland Government. Mr. Rowlands has done good work in Tasmania, particularly in conection with the State school packing classes.

"FRUIT WORLD" APPRECIATED IN NATAL.

Welcomed for 10 Years.

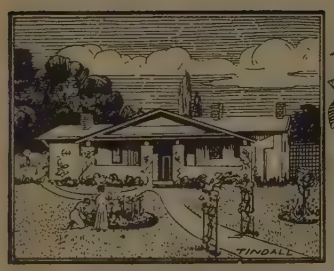
December 6th, 1922.

To the Manager, "Fruit World of Australia."

Sir,—Enclosed pleased find P.O. 20/- in payment of your account, and for one copy of "Australian Fruitgrowers' Annual," 1922; balance to my credit please.

The "Fruit World" is always a welcome arrival here, and is read with unabated interest. During the ten years I have been a subscriber I have gleaned much useful information from its pages, and many practical tips of real value.—A. E. Dix.

"Roseland Orchards," Winterton, Natal.



BEAUTIFYING THE ORCHARD HOMESTEAD

Sweet Peas.

THERE ARE ORCHARDS in the mountains and in the cooler districts, just as there are on the plains and in the warmer areas. I spent my holidays in the mountains, and some of the gardens that I saw were really glorious. In one of these, there were row after row of Sweet Peas, of all shades of colour, and in masses of bloom. You who live in the warmer parts just think of it—bowls of Sweet Peas in the house early in January.

The gardener told me, too, that he gathered bunches every week and sent them to the city flower shops, where they brought him in some good pocket money. He proposes to make quite a big planting during the coming season, so as to supplement his income next year. In the cooler climates, spring and summer, especially the latter season, are the times for flowering these sweet and fragrant annuals. The warmer areas produce the blooms in winter and springtime.

In either case, it is advisable to make an early start at sowing the seed. So many gardeners say, "Oh, there is plenty of time!" And then, when their friends have early flowers, they put their failure down to bad luck. I say emphatically that most garden failures are due to the late sowing of seeds.

The theory of it is this: Good big sturdy plants before the cold of winter comes to check the growth. No growth or increase of growth comes during winter. As soon as the geniality of spring urges the plants into further growth, the flower buds quickly develop and the flowering season takes most of the energy of the plants. So that the more extensive the foliage and growth development that can be obtained before winter, the greater abundance will be the subsequent blooms.

Sweet Peas produce an extensive root system, and in order to have this the ground should be well worked prior to seed sowing. Some authorities say that two, and others say three feet, should be the depth of working. I suggest that the former is sufficient; and some old stable manure should be well mixed with the soil in the working.

The soil should be well moist at the time of sowing, but it should not be muddy. Various opinions are held by experts as to the desirability of soaking the seed in water before sowing, or of sowing the seed in a dry state. If the seed be soaked before sowing, care must be taken that the soil does not become dry afterwards.

When the young plants are a few inches high, the centre of the runner should be pinched out, so that the plant may stool out, and produce several runners or vines. Good watering, feeding, and cultivation, as well as training the runners are the subsequent necessary work.

Great annoyance is being experienced by Sweet Pea growers, by the death of plants just as they reach the flowering stage. The leaves turn yellow, and the whole plant quickly dies. This is generally due to a fungous disease known as Fusarium. This fungus attacks very many cultivated plants, and the spores are found in the soil. It is wise to lime the soil some time before sowing; and the wisest thing is to refrain from sowing in soil that has previously grown diseased plants. A further and fuller precaution would be to soak the seeds for twenty minutes in a weak solution of formalin, or in a 1 in a 1,000 solution of corrosive sublimate.

Sweet Pea streak affects the plants when they are quite young. It appears in yellow streaks on the foliage, which soon weakens and dies. No remedy is known, and as soon as it appears the plants should be pulled up and burned.

. . . . .

This Month in the Garden.

BEFORE FEBRUARY ENDS, the wise gardener will have sown seed of all of his winter and spring flowering plants. These are Primulas, Stock, Wallflower, Pansies and Violas, Iceland Poppies, and similar plants. Antirrhinums (Snapdragons) may also be sown, but no blooms will come early, unless the seed be sown very early. Late sown seed or late plants will make but little development in winter.

Preparation may be made for planting bulbs. The ground should be dug, watered, and manured. Then it is ready for planting the bulbs in March or April. Where the bulbs are already in the ground, they should, in February, be given a really good soaking of water. No half measures, but a good soaking to allow the water to get right down into the subsoil. The Guernsey Lilies, Nerines, will now be flowering. These are at times difficult subjects to induce to flower. As soon as the flowers are gone, the foliage should be encouraged to grow by watering. As soon as the foliage dies down the bulbs should be allowed to rest till next flowering season. They need a dry, sunny spot; and the bulbs should be planted with the tips above ground.

. . . .

Violets and Primroses.

THESE LOVELY WINTER FLOWERS should be looked at just now, for in many parts of the Commonwealth the season has been a very dry one. Where these plants have been grown and the season has been at all dry, the crowns of the plant should be mulched now to protect them from the sun and to keep them cool. In a very short time these plants will begin to spring into growth, preparatory to flowering in the autumn and spring. Any mulch should not be rich—a grass or straw mulch would be preferable—for too much food at the growing season will induce an abundant leaf growth to the detriment and reduction of the bloom crop. These plants should be fed after flowering, and not before. Then the food enriches the crowns and gives them energy for the next season's flowers.

It is not yet too late to sow seeds of Primrose and Polyanthus, and their hybrids. The seed should be lightly sown in boxes or pans in a light, sandy soil, with which some old leaf mould has been mixed. The boxes should be kept where they will get the morning sun only; the soil should be kept moist—under these conditions the seed quickly germinates. At quite a small stage the young seedlings may be pricked off into pans or boxes; and it will not be many weeks before they are ready to plant out for the flowering season later on. They flower in a few months after sowing the seed.

. . . .

The Auricula.

CLOSELY ALLIED TO THE PRIMROSE is this wonderful flower. The leaves are broader and of thicker consistency; the flowers are carried in much the same way, but they have more substance and evenness of outline. The brown, purple greenish and intermediate shades are very rich, and the mealy vestiture with which they are endowed, adds to their attractiveness.

They prefer a moist, shady position. I have seen them simply revelling against a south wall, growing among small ferns, Rhododendrons and Azaleas. They love a summer top dressing of cow manure.

Once grown, the old-fashioned Auriculas, with its new-fashioned shades, would become popular with those who love uncommon shades and dainty flowers.

TO MAKE COUNTRY LIFE MORE ATTRACTIVE.

To reduce working hours, a South Australian reader suggests as follows:—

Water to be laid on from the tank to washhouse, bathroom and kitchen.

Chaffhouse at end of stable, with door leading from stable to chaffhouse. (Suggested stable constructed of stone, cooler than iron, with scrub broom on the sides).

Barn of stone, with iron roof, floor timber or concrete; floor to be high enough for dray to go alongside for loading.

Implement shed essential, each implement to be overhauled before being put away.

Substantial fences are an asset; repair defects as soon as noticed.

Ornamental and useful timber trees should be planted.

The aim should be to shorten hours where practicable. The reason so many of the younger generation left the country for the town was the shorter hours of labor, Saturday afternoon holiday, and Sunday free from work.

Bunchy Top in Bananas.

In reply to an enquiry, Mr. Geo. Valder, Director of Agriculture, N.S. Wales, writes (8/11/22):—

Researches in regard to "Bunchy Top" disease in Bananas have occupied the attention of the Chief Biologist (Dr. Darnell-Smith). He states that several minute organisms have been isolated from the diseased roots—among them a Fusarium.

This organism has not yet been proved to be identical with **Fusarium cubense** — the cause of "Panama Disease"—nor has it been invariably found on diseased plants, although it is under suspicion.

The means adopted for the prevention of "Bunchy Top" in plants have hitherto been carried out upon three main lines:—

1. By the introduction of healthy suckers from districts in which the disease is not known to exist.

2. By the application of various fertilisers or mixture of fertilisers.

3. By the treatment of suckers before planting with various fungicides.

None of these measures can be said to have definitely arrested "Bunchy Top."

Recently a Mr. Marks has asserted that "Bunchy Tops" is caused by Aphids and that if these are controlled by Kerosene Emulsion—no "Bunchy Top" will develop in healthy, newly-planted suckers. He is carrying out upon a ¼-acre plot (from which Banana plants affected with "Bunchy Top" have previously been removed) an experiment to demonstrate his method to the Tweed Fruitgrowers' Association. The experiment will cover a period of two years.

The Department will keep in touch with this experiment, and will carry out an exactly similar experiment over the same length of time upon a similar plot in a different district.

Further experiments in manuring are to be carried out upon land previously subsoiled and limed. A mixture of basic super, nitrate of soda and postassium sulphate will be used as fertilisers.

Investigations Being Made in Queensland.

Resultant upon a recent deputation of the Currumbin Fruitgrowers' Association to the Minister for Agriculture, regarding the seriousness of the affectation known as Bunchy Top in Bananas, Dr. Darnell Smith, Vegetable Pathologist of N.S. Wales, visited Brisbane and conferred with Mr. Henry Tryon, Entomologist and Vegetable Pathologist, of Q'land. They have decided to conduct in future joint investigations.

A visit was made to the Currumbin and Tweed districts, where observations were made by them, and experiments, chiefly manurial, being carried out by the N.S.W. Department of Agriculture, were demonstrated.

They were accompanied by Mr. R. W. Peters, Assistant-Instructor in Fruit Culture, who is in charge of the Southern District of Queensland.

A joint report on the present position, and a programme of operations in regard to methods to combat it, is expected at an early date.

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YOU are invited to become a shareholder
AGENTS WANTED

NEW SOUTH WALES

Association Meetings.

Sowing Cover Crops.

Orchard and District News and Notes.

At the December meeting of the Central Executive of the Fruitgrowers' Association of N.S.W., there were present: General Heane (in the chair), Messrs. Wark, Ray, Taylor, Cowlishaw, King, Nicolson, McMahon.

Finance.—The pool-buying sales for October and November amounted to £2,215/10/-.

As the financial position appeared unsatisfactory it was decided to write to all branches and the delegates of the last conference, placing the position very strongly and urging the necessity for some immediate action being taken. Each Executive councillor agreed to advance the sum of £10 on loan to the Association.

Banana Growers and Distributors Ltd.—The president reported having received a letter of apology from this company following on a statement made by an organizer of the company at a meeting of fruitgrowers at Dural, at which it was stated that the "fruitgrowers' leaders had been bought."

In spite of the fact that the Executive has not given its support to this company, Mr. King reported that the company's organizers were stating in his district that the company has received the support and backing of the Executive.

Committee of Agents.—In reply to a letter from the Secretary of the Associated Selected Agents, it was decided that as the Association is already co-operating with the Agents' Association in matters affecting the marketing of fruit, no good purpose would be served by holding a conference at this stage.

Street Fruit Barrows.—It was decided that with a view to increasing the consumption of fruit, the City Council be requested to increase the number of licensed barrows at a lower rental than is at present being charged, and that sub-letting of barrows be disallowed, and that all barrows licensed must be worked.

Next Annual Conference.—It was decided that the invitation to hold the next conference at Goulburn be accepted—from the 29th May to 1st June. About 60 delegates are expected.

Experiments in Cool Storage of Citrus Fruit.—It was decided that the Department be communicated with expressing disappointment that progress reports had not been made available as to the results of the citrus fruits and also if it was intended to carry out experiments with other fruits.

Preparation of Colloidal Sulphur.—Reference was made to an article appearing in a recent issue of an Agricultural Gazette in regard to this matter, and it was decided that a letter of thanks be forwarded to the Department.

Yass.

The storm which recently passed over the Yass district did not damage the fruit crop to any extent. It is expected 20,000 cases of the best commercial varieties of Apples and Pears will be harvested this season.

MURRUMBIDGEE IRRIGATION AREAS.

Griffith, N.S.W.

Fumigation.

This season it is proposed to make a special effort to thoroughly clean up the Griffith area by providing means by which all growers can have all infected trees fumigated if they wish, and every citrus grower is earnestly urged to take advantage of the opportunity.

If sufficient support is forthcoming, a sufficiently large fumigating plant will be purchased, and a staff employed who will be able, within the summer and early spring, to fumigate the whole of the orchards needing the service.

H. M.
WADE
& Co.
FRUIT MERCHANTS
Prompt advices of sales
Cheques Weekly
435 FLINDERS LANE
MELBOURNE
Corner of William Street,
Opposite Western Market

A charge of 3/- per tree will be made, of which half only need be paid at once, and the balance in 12 months later.

Judging by the losses incurred by Red Scale growers last season, the expense will be readily recompensed in the first season, whilst the benefit to the area as a whole will be immeasurable. Remember that we shall need to depend upon export for our citrus sales in the near future, and dirty fruit is not only unacceptable abroad, but, in America and Canada one case of Red Scale fruit will suffice to condemn an entire shipment.

Spraying for Brown Scale.—This pest also needs early attention. Speaking generally, it does not cause such heavy losses as the Red variety, but, if at all heavy, disfigures the fruit badly. Spraying with Red Oil or Resin Soda is very effective, but spraying should not be done on a hot day. Gumlypta is also worth a trial as it is claimed that it can be used in the hottest weather.

Valencias.—Final payments have been received for the fruit supplied to the pool. Some 11,000 cases were disposed of in various centres. Of these, 3,000 cases were sent to Canada, 2,000 to local country towns, 2,000 to Queensland, 2,000 to New Zealand and the balance to Sydney and Melbourne.

The utmost difficulty was experienced in securing satisfactory prices owing to the low state of all markets. New Zealand's prices showed a return of only half last year's prices.

Attention has been drawn on the final statement to a 3 per cent. shrinkage due to evaporation losses. It will be appreciated that, as a large proportion of the crop was handled in warm weather, a certain amount of loss in weight must be expected.

Cover Crops.—These must be sown early to secure sufficient growth before the winter checks them. Amongst the older deciduous trees it is essential for a good cover crop that super. shall be applied with the seed at the rate of at least 1 cwt. to the acre. Even amongst citrus and young deciduous trees super. is thoroughly justified.

Further, for the older trees a dressing of sulphate of ammonia at the rate of ½ cwt. per acre will improve the green crop.

Barley—Sow from end of January to end of February. **Field Peas**—Sow from middle February to middle March. **Tick Beans**—Sow from middle February to first week in March. **Oats**—Sow from early March to end of March. **Bokhara Clover**—Sow from early March to end of March. **Rape**—Sow from middle February to first week in March.

These details are based upon getting a good stand to plough in early in August. If sowing is done later there is always the possibility of ploughing being delayed.

Do not plant a cover crop amongst trees or vines without furrowing out so that a late or winter watering can be given if required.

Elections.—A general meeting of the members of the company will be held in February. Nominations for the committee and directors will be called for shortly.

Get Ready Now.

There is a bumper crop this year and certainly within the next few years there are going to be produced on this area larger crops still, which will far surpass in size any Apricot crops which have ever been grown heretofore in N.S.W.

The foregoing matter is extracted from the bright monthly circular the "Co-Optimist," issued to members by the fruit branch of the Griffith Producers' Co-operative Co. Ltd., N.S.W.

Murrumbidgee Irrigation Areas.

(By Our Correspondent.)

The Leeton cannery, operating under the Federal fruit pool, has handled about 500 (five hundred) tons of Apricots this season, the larger proportion of which came from orchards in and around Leeton, and the balance from Griffith. Two hundred and thirty girls have been employed upon this pack, and the standard of quality is remarkably high, since the fresh fruit can, in most instances, be processed within a few hours of picking.

Drying.—About 240 tons of Apricots have been handled by the M.I.A. Co-

Branch of Trevatt Apricots grown under irrigation by Mr. A. Mason, Yanco, N.S.W.; 43 Apricots to the branch; up to 66 Apricots have been taken from other branches of the tree.

operative Co. Ltd., and a large number of the Leeton growers have dried their fruit upon the individual farms. In Griffith, owing to the difficulties of transport, with regard to the fresh and canning fruits, a high percentage of the growers have also dried the bulk of their Apricot crops individually. A remarkably good standard of quality has been attained this year, and it is estimated that 75 tons of dried Apricots (equivalent to about 500 tons fresh) will pass through the settlers' own marketing organization—i.e., the Griffith Producers' Co-operative Co. Ltd.—into the hands of the Coastal Farmers' Co. Ltd., who are handling the bulk of the dried fruits product from both ends of the M.I.A.

A large number of the Griffith settlers have also disposed of their Apricots outright to the Griffith Fresh Fruit and Ice Co. Ltd. This company is drying on a large scale, and is reported to have produced some 30 tons of dried Apricots to date. The prices paid ranged from £9 to £12 per ton for fresh fruit delivered at the drying ground of the company.

Mr. Evatt.—The settlers on the M.I.A. as a whole are much concerned about the report that Mr. G. J. Evatt, Acting-Resident Commissioner, is not to be confirmed in his appointment. Mr. Evatt, since his first appointment to the areas, has shown himself at all times sympathetic towards the best interests of the settlers and their organizations, and under his tactful administration, a better spirit of mutual understanding has supplanted the original feeling of antagonism between settler and authority, which came into being after the death of Mr. L. A. B. Wade. The removal of Mr. Evatt would be a loss to the community, which has already suffered enough under constantly changing administration.

American Advice.—It is reported that the State Government has invited an American Irrigation Settlement Expert (Mr. Elwood Mead) to visit the M.I.A. and to express his views, from an American standpoint, as to the position thereon.

Sydney Markets.—Owing to the lack of rains and the faulty setting of crops on the coast, for the first time in many years the city of Sydney has provided a payable outlet for a quantity of fresh fruit from the M.I.A.

New Winery at Yenda.—Messrs. McWilliams and Sons hope to complete their winery at Yenda in time to handle the Grape crop in that district this season.

Transport of Wine Grapes to Penfold's Factory.—It is understood that Messrs. Penfold's Wines Ltd. are establishing a motor lorry service between Yenda and Griffith, for the transport of wine Grapes into their factory on the outskirts of the Griffith township. The vignerons will be expected to cart their Grapes to a convenient depot, and the motor lorry will transport the Grapes therefrom. This is an entirely new departure for any business concern on the M.I.A., and one which might be adopted, co-operatively, by the orchardists on the fruit farms.

Batlow.

Mr. N. H. Case, Batlow, N.S.W., writes:—

Seasonable Work.—Orchard operations for February mainly consist of preparations for harvesting and marketing. Where Codlin is in evidence a final arsenate spray may be advisable. Case timber and packing material should be on hand.

Spraying.—Increasing the percentage of arsenate when using power sprayers would hardly appear to be warranted, seeing that the higher pressure should give a finer spray and greater covering power. This is particularly the case with spray guns, which are very generally used in this district. The smaller percentage with a good spreader should be efficient.

Manuring.—My experience goes to show that ammonia sulphate applied about 30 days before blossoming is a satisfactory manure. Blood and bone had no apparent effect. The importance of green manuring must not be overlooked.

Export.—The quantity of fruit to be exported from this district will be small, because of the exorbitant freight charges. Probably it will amount to between 15,000 and 20,000 cases.

Crop Notes.—Despite the dry season, crop prospects are still good, and the quality promises to be quite up to Batlow standards.

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LONDON, E.C.,4., ENG.

We are the largest receivers of Green Fruit from Australia, our consignments having steadily increased annually since our business was established in London in 1902. Our Managing Director has had the handling of consignments to the markets of Great Britain and Europe since 1900, and personally supervises the sale of all fruit consigned to the Company. Fruit is placed for sale in whatever markets or way (auction or private) appear most suitable, thus getting it before all classes of buyers; our increasing consignments demonstrate the success of this practice.

F. W. J. MOORE, Managing Director
Telegrams: Tirralirra London
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District Notes.

The construction of the railway from Gilmore is practically complete, and the line will shortly be open for traffic. This will be an immense boon to growers.

The Co-operative Cool Store is nearing completion, and will be in operation during the coming season.

A large number of growers have formed an association with the object of following the Tasmanian plan of marketing only through a committee of selected agents. Very beneficial results are anticipated.

Poultry Notes.

A Few Hints on Fattening.

MOST POULTRY BREEDERS are faced with the problem of disposing of their surplus cockerels at this time of the year. Having separated the sexes it is advisable that the cockerels be fattened and marketed as quickly as possible. With this end in view, the first step is to see that the birds to be fattened are kept in close confinement. They will then commence to put on weight much more rapidly.

The food employed must, of course, be carefully considered. It is advisable to use chiefly soft foods, such as grain meal and table scraps which, when mixed with liquid, are more easily digested than whole grain. The latter is used where birds have opportunity for exercise, because it lasts longer, and is therefore more sustaining.

Ground oats is one of the best fattening meals that can be employed, and barleymeal is also very good. Ground oats contains 6 per cent. fat, and a considerable amount of phosphates, which help to make the flesh white, and at the same time give it a good flavour.

All meal should be mixed with skim milk where possible; in fact, fattening fowls require plenty of milk, which also has the effect of whitening the flesh. It is said to be desirable to mix the meal with the milk a few hours before feeding. During the time it is standing a slight fermentation takes place, which, it is claimed, assists the process of fattening to a considerable extent.

Never feed fowls mash food on a litter of any kind, as crop troubles will ensue. Always use a sack to place it on.

If you find a fowl eating her eggs, make a new nest in a dark corner with the top of the nest fairly low If the darkened nest does not stop her the axe will. The removal of a quarter of an inch of the bird's top beak will often stop egg-eating

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See that birds in confinement are provided with a dust bath of fine dirt, sand, or ashes. This should be slightly damped in hot weather and dry in winter.

If a bird is crop bound, give her a dose of castor oil and whisky, and then pour hot water down her neck into the crop and work it about with your hands.

Your eggs will always bring 1d. a dozen more if properly graded.

Vermin causes enormous losses every summer, both in death-rate and in retarding egg production. See that they are not allowed to destroy your profits. in this way.

The morning mash should be mixed to a crumbling consistency. To assure this add the liquid gradually.

A shipment of new laid eggs from Western Australia during a recent glut period was a pronounced success. They arrived in fine condition, and prices ranged from 2/5 to 2/6 per dozen. Best new-laid English eggs were selling in London at 3/6 to 3/11 per dozen at the same time.

VICTORIAN EGG PRODUCERS' ASSOCIATION.

At the recent Conference of the Victorian Egg Producers' Federation, Mr. A. W. Smith presiding, members were advised by the Executive to dispose of their eggs through the Gippsland and Northern, Western District, or Poultry Farmers' Co-operative Companies. Producers were urged to be loyal, even if it meant temporary sacrifice, as thus would the industry be built up. Any egg producers desiring further information are invited to write to the Organising Secretary, Mr. A. McPhail, 4 Belgrave-street, Cobung.

Beekeeping.

Distribution of Pollen.

Beneficial to Plant Life.

USEFUL THOUGH THE HONEY-BEE is to man (says an expert in the "Adelaide Observer"), by its direct production of honey and wax, its beneficial influence by no means stops short there. Indeed, it is questionable which is the greater value, its indirect usefulness or its more obvious economic value. While numerous insects play to some extent a part in the fertilisation of flowers, not one performs anything like the amount of work done by the honey bee.

The reason why bees are so extremely useful in this fertilisation process is, of course, that they require the fertilising matter, or pollen, not only for their own consumption, but the brood in the hive. They also store it in the waxen cells for use when none is obtainable in the orchard or fields. This gathering of the pollen necessitates regular and frequent journeys after it, even when honey or nectar is not to be had. Other insects visit the flowers for their own individual needs, and are therefore not frequent visitors.

Ways of Nature.

There is another feature which makes the bee pre-eminent as a pollen distributor, and that is its systematic way of working. That a bee visits only one kind of flower on each journey is questioned by some observers, but for all practical purposes, it is so.

It can be taken as a fact that this insect, in visiting a flower, gathering pollen, will convey the fertilising power to another plant of the same, and not another species. When they pack it into the pollen cells they are not particular, but will place one sort on top of the other. Cut a full pollen cell down with a warm knife, and the different strata will be plainly seen.

There are a number of flowers which depend on the wind as an agency for fertilising, and it is significant that these do not produce nectar. They do not require the insects so do not attract them. Nature has constructed some blossoms and their method of development so that it is almost impossible that they should be fertilised by their own pollen. Usually the stigma and anthers develop at different times, so that fertilisation can only take place from another flower.

Just at the time when the orchard is bright with fruit blossoms, the bees require quantities of pollen for their family needs.

Good Effects in Orchards.

Only by the perfect fertilisation of fruit blossoms at the correct time can a good crop of fruit be obtained. Bad weather in the spring, when there should be plenty of sunshine, will sometimes be the indirect cause of a poor crop. The direct cause is more likely the adverse weather conditions preventing the bees visiting the flowers and fertilising them.

To the fruitgrower there is no doubt whatever that

Bees are Quite Essential.

and it has been proved over and over again that when bees are located near an orchard it becomes vastly more productive.

In America, many successful fruitgrowers invite bee-keepers to locate bees in their orchards, and in some instances provide space and buildings necessary to accommodate them, and their appliances. Should the orchardist be fortunately located within half a mile of someone who has a number of colonies of bees, there is no need to keep any himself. If not so fortunate he should see that arrangements are

made that 10 to 20 colonies are in the orchard during the fruit blossoming.

There are other insects that take a share of the work, but what a difference between the ceaseless activity of the bee and the comparatively slow work of the others.

The bee works overtime for the orchardist.

An experiment made by Professor V. H. Lowe, of New York, is worth quoting.

A gauze hood was placed over a Pear tree, the object being to exclude ants, bees or anything that might assist in pollenising the blossoms. Although everything was favourable for a good crop, except that the insects were cut off, the tree did not set one fruit. Another close by, not covered gave a good crop.

In another case, where it was not practical to envelop the whole tree, a limb only was enclosed in a gauze bag. The result was that the portion uncovered bore fruit, while the covered limb, on which were over 2,000 fruit buds, matured one fruit only.

SHOWS TO COME.

Victoria.

March.

Diamond Creek	10
Somerville	14
Ringwood	16-17
Yarra Glen	21
Croydon and District (Kilsyth)	23 & 24

New South Wales.

February.

Inverell	6 & 7
Central Cumberland (Castle Hill)	9 & 10
Yanco (Leeton)	9 & 10
Nepean (Penrith)	22, 23, 24
Wyong	23, 24
Newcastle	27 to March 3

March.

Central New England (Glen Innes)	6, 7, 8
Hunter River (West Maitland)	7 to 10
Camden	16, 17
Batlow	20-1
Royal Agricultural Society of N.S.W.	26 to April 4
Hawkesbury River (Windsor)	April 3, 4, 5

Queensland.

Stanthorpe .. Feb. 7, 8, 9

Fruit Canners will be interested in the circular we have received from the Max Ams Machine Co., New York, U.S.A., illustrating their lining machine for applying sealing fluid to round can ends. The output of the machine is said to be 240 ends per minute. An illustration is also shown of their dryer for lining machines; output, 240 can ends per minute.

No man will discover the best way to do a thing unless he likes doing it.

Extraordinary Fruit Packing Exhibition

Mr. Ray Moore, of Penang Mt., Gosford, N.S.W., packs 300 Bushel Cases of Oranges in 8 hours 58 minutes

Claims Championship Title.

AS THE RESULT OF A WAGER between Messrs. Ray Moore, of Penang Mt., and Neville Phelps, Mangrove Mt., Gosford, N.S.W., an exhibition, which was probably the fastest demonstration of fruit packing ever seen in Australia, took place on November 22 last, at Mangrove Mt., in the packing shed belonging to the Central Mangrove Mt. Citrus Packing House Ltd.

Some few weeks previously Mr. Ray Moore, well-known in citrus fruitgrowing circles as the owner of one of the largest and most up-to-date citrus orchards in the Gosford district, issued a challenge that he would pack 300 bushel cases of Oranges in ten hours for a wager of £50.

The challenge was taken up by another grower, Mr. Neville Phelps, the stake money placed in the hands of Mr. W. J. Black, of Mangrove Mountain.

The Central Mangrove Citrus Packing House Ltd. placed their well-equipped shed, the 300 cases of Oranges necessary for the exhibition, together with their staff of four men at the disposal of the interested parties.

Messrs. W. J. Black and Tom Best were appointed to act as tally clerks and judges.

With his gigantic task before him, Mr. Ray Moore commenced at 7.20 a.m. to pack the first case of Oranges, which he completed in 72 seconds

Without any apparent effort his first hour's packing was 31 cases, and at the adjournment for lunch, after 4½ hours' work, he had packed 136 cases, which were loaded on to Mr. G. Roberts' motor lorry and taken to Gosford en route to the Sydney markets.

On resuming after lunch Mr. Moore commenced to pack in earnest, and rattled through the packing at a great pace, and packed 36, 36, and 39 cases during the fifth, sixth and seventh hours respectively. It was quite apparent then to those present that Mr. Moore would easily win his bet. At 5.17 p.m. he commenced to pack his last case containing 113 Oranges, which he packed in record time of 42 seconds, and thus achieved the extraordinary feat of packing 300 cases of Oranges in 8 hours 58 minutes, or 1 hour and 2 minutes under the stipulated time of 10 hours, at an average rate of packing per hour, 33 1-3 bushel cases.

The fruit was all packed according to the standard of the packing shed, in bushel cases containing a few with 80, but mostly 96, 113, 125 and 138 Late Valencia Oranges, and as evidence that all the cases were well and truly packed, and that no faulty packing would pass, the judges refused to pass 50 cases for some minor fault. This number of cases Mr. Moore repacked, which actually makes his achievement all the more remarkable, as they were all repacked within the time already stated.

The exhibition was witnessed by about 70 local growers, as well as interested visitors from other fruitgrowing districts.

Mr. Ray Moore now claims his achievement to be an Australian record for fast and lengthy fruit packing, and is prepared to accept a challenge from any fruit packer who will contest his claims to being the champion fruit packer of Australia.

This is a copy of the agreement entered into between the interested parties:—"I, Ray Moore, of Penang Mountain, have this day, September 25th, 1922, entered into a wager of £50 aside with Neville Phelps, of Mangrove Mt.

"I, Ray Moore, undertake to pack 300 Imperial bushel cases of Oranges in ten hours (with a spell allowance of an hour exclusive of the said ten hours); all fruit to be packed according to standard pack, that is to say, no fruit is to be too high or too low. Any such faulty packs to be repacked within the prescribed ten hours.

"On my failing to accomplish the above contract I will forfeit the sum of £50 to the aforesaid Neville Phelps.

"None but the challenger (Ray Moore) to handle the fruit whatsoever within the period of ten hours."

(Signed) **Ray Moore.**

Witness to Signature—

H. Griffith.

Deposit received £1 (one pound) from Ray Moore in the hands of H. Griffith.

Deposit received £1 (one pound) from **Neville Phelps** in the hands of H. Griffith.

Signed this 25th day of September, 1922, in the presence of H. Griffith.

SPRAY SPREADER AND ADHESIVE.

We have received from the United States of America printed matter regarding "Kayso," a preparation which is used largely in America. It is claimed by the manufacturers that "Kayso" spreads the spray material and makes it stick and cover more trees. In this connection Professor A. L. Lovett, of the Oregon Experiment Station, states that by increasing the wetting and spreading properties of the spray solution or mixture, less quantity of spray is required in spraying an orchard. It is further claimed that "Kayso" supplies the necessary spreading requirements for sulphur sprays, Bordeaux mixture, arsenate of lead, and nicotine sulphate.

Australasian Fruit for Hull.

A Progressive Port.

Interview with Mr. J. F. Kruger (White & Son Ltd.), Hull.

Mr. J. F. Kruger, a director of Messrs. White & Son Ltd., Hull, England, is again in Australia for the third fruit season in succession.

On his way Mr. Kruger visited New Zealand, where he made arrangements for a proportion of the export trade to be consigned to Hull. Mr. Kruger emphasizes the importance of decentralization as regards marketing Australian fruit in England, and affirms that it is a mistake to concentrate all supplies on London.

Last season Hull received 51,000 packages of Australasian fruit, and the prices were shillings above those received in London.

With regard to Oranges, the medium sizes sell better than the larger ones, although, of course, all sizes are needed to suit the various classes of buyers.

Arrangements have been made for a steamer, the "Port Bowen," to go direct to Hull from Melbourne. There is space for 25,000 bushels of Apples, and it is hoped that growers will readily support this progressive effort. Applications for space should be made to Parnham Pty. Ltd., 60 Queen Street, Melbourne. The dock facilities at Hull are of the latest design. In fact, three years ago, the s.s. "Palma" landed, sold and delivered to buyers a cargo of 55,000 cases in 40 working hours.

Mr. Kruger points out that Hull is distinctly going ahead as a fruit port. Buyers attend the Hull sales from Scotland, the Midlands, and various ports of England. Continental buyers are in evidence, though of course not to the same extent as pre-war. The competition is keen and buyers from the Midlands and North are finding their needs well catered for. They can buy freely in Hull because of the saving of freight that they would otherwise have to pay if obtaining fruit from London.

From the fruitgrowers' point of view it will be noted that the charges are 1/- per case in Hull, as against 1/3 per case which is charged by the majority of the London traders.

Owing to the progressive methods of Messrs. White & Son Ltd., the fruit trade with Hull has developed very considerably. Hull now receives fruit from all parts of the world, including United States of America, Java, Spain, Portugal, Egypt, Italy, the Canary Islands, as well as, of course, Australia and New Zealand. This is with direct boats without transhipment.

"I do not think it is fully recognized," states Mr. Kruger, "that Hull serves a population of 13,000,000 people, that is, a population within easy radius of more than double the population of the Commonwealth and New Zealand combined. Conditions in the Old Country are settling down. I think they have touched rock bottom and are now on the mend. Fruitgrowers of Australia and New Zealand would do well to fix definitely in their minds the idea of consigning at least a portion of their English shipments to the rapidly developing port of Hull."

PRICES FOR "POOL" FRUITS.

Fruitgrowers Object to Reduced Prices.

A deputation representing the orchardists who are supplying fruit for the Commonwealth Canned Fruit Pool waited on the Federal Country Party during January with the request that the prices be not reduced below those paid last year. The deputation was introduced by Mr. W. C. Hill, M.H.R. Speakers included Messrs. W. J. Foster (Merrigum), F. Pullar (Ardmona), —. Bazley (for Returned Soldiers), A. Leune (Ardmona), —. James (Shepparton), and R. E. Boardman (Australian Conference of Fruitgrowers).

The position as stated by deputationists set forth that on last year's prices, growers were just able to pay wages, &c., and cost of growing, without receiving anything in the way of interest on capital invested or any allowance to the owner for cost of management or salary, nor was the return sufficient to allow for any depreciation on plant or on orchard, &c.

Note These Comparisons.

Fruit.	1921-22 Pool Prices (Ton).	1922-23 Pool Prices (Ton).	Pre-war Prices Average (Ton).
Apricots	£10 10 0	£10 0 0	£15 0 0
Cling Peaches ..	10 10 0	10 0 0	14 0 0
Pears	11 13 4	10 0 0	15 0 0

Thus prices have fallen and the working costs are quite 50 per cent. above pre-war.

Not only are the prices reduced, but the inspection is more strict, necessitating more labour in picking and packing. There will be a larger percentage of waste this season.

The reasons for forming the canned fruit pool were:—

(1) To assist the fruitgrower, which should include paying to the growers a price sufficient to allow them to maintain their orchards and themselves, and thus hold, as a valuable asset to the Commonwealth, the orchards which have been established at such a large capital cost, and which have taken so many years to establish.

(2) To put up a pack of so good a quality under Government supervision that the reputation of Australian canned fruit would be established as second to none, and that in consequence a goodwill would be established for future years.

The Sugar Position.—Fruitgrowers would welcome an enquiry as to the costs of production of fruit. The last Royal Commission on sugar took evidence and recommended an increase from £21 to £22 per ton for sugar. The Government paid £30/6/8 to the producers, and the fruitgrower has to pay for his sugar requirements on that basis.

Cuban sugar, f.o.b. Cuba, reached the low level of £10 per ton in January, 1922 American canners bought at low rates, and are thus in a strong position to compete against us

Figures were quoted (as published elsewhere in this issue) setting out a comparison between pre-war and present prices for sugar and fruit.

Dennys, Lascelles Ltd.

509 COLLINS STREET, MELBOURNE

(Head Office & Wool Stores at Geelong)

Exporters of Fruit

to the Oversea and Inter-State Markets

SWANN & Co.

Established 1822

A century's experience in handling

FRUIT OF ALL DESCRIPTION

All consignments for U. K. will have

Personal Supervision and Attention.

Account Sales and Cheques despatched immediately after sale

3, Salters' Hall Court, London, E. C. 4, England

Cables:—FIREBRICKS, LONDON

Bankers:—Bank of England

Australian Representative—

Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.

Victorian and Tasmanian Agents: Bailey, Baldwin Pty. Ltd., 552 Flinders Street, Melbourne.

In America the growers are receiving this year for canning fruit—Clingstone Peaches, £15 per ton; Apricots, £20 per ton; Pears, £16 per ton.

In the present Commonwealth canned fruit pool, growers should certainly receive not less than the low prices paid last season.

For the steamer "Port Bowen," sailing from Melbourne on 29th March, direct to Hull, and carrying 25,000 cases of Apples, Growers must apply IMMEDIATELY for shipping space through OUR AGENTS:

Messrs. Parnham Pty. Ltd.
60 QUEEN STREET, MELBOURNE

White & Son Ltd.
HULL ENGLAND

Market for Australian Grapes in Canada.

Good Prospects During April, May and June.

The following are extracts from a letter forwarded to the Canadian Trade Commissioner by a Queensland Grape grower:—

Our soil is a deep granite, and our Grapes are remarkable for their long keeping quality. I have cold stored two black varieties this autumn for 16 weeks, and to-day, although 10 days out of cold store, are still in perfect condition. We are contemplating planting extensive areas under these varieties with a view to trading with Canadian towns in spring. Our Grapes ripen in the beginning of March, and allowing one week for packing and freight to Sydney and three weeks by steamer, we could land some in perfect condition in four weeks from time of picking, on the wharves of Vancouver. The crop would land in Canada during April, May and June. I should esteem it a favour if you would help me to clear up some mental difficulties by answering the following queries:—

(1) Any prohibition or difficulty in Grapes entering Canada from overseas? Ours is a Phylloxera free State.

(2) Would Black Grapes (Purple Cornichon and Black Malaga) be in demand in Canada in spring? If so, up to what date in summer?

(3) If Grape trade started to Vancouver would refrigerating cars be available to extend trade to Montreal, Ottawa, and other Eastern towns?

(4) Could any approximate estimate be made for returns in Grapes landed in Canadian towns in cork dust and in good condition? Our returns here nett about 8/- (2 dollars) upon a box of 25 lbs.

(5) The approximate expenses to Canada in terms of local price, say:—2 boxes of 25 lbs. each=1 bushel

Nett return	16/-
Freight to Sydney and charges	2/6
Freight to Vancouver	6/-
Wharfage and commission	2/-
	26/6

26/6 for 50 lbs.=say 7d. per lb., or 14 cents per lb.

If goods sent East transportation charges to be added. Could you estimate approximate wholesale prices of such Grapes in Canada landed in good condition at the above-mentioned periods, and compare them with the above return, and state whether in your opinion an effort to develop trade is worth while?

REPORT BY CANADIAN TRADE COMMISSIONER.

The following reply was supplied by the Trade Commissioner as a result of inquiries made in Canada:—

Re Market for Australian Grapes.

The general impression seems to be that there is a market for Australian Grapes, of good quality, on the Canadian markets during April, May and June.

(1) There is no prohibition or difficulty in Grapes entering Canada from overseas. At the present time there is a regulation, however, of the Entomological branch to the effect that should any fruit, upon inspection, be found to be diseased, it may immediately be destroyed.

(2) The Grapes mentioned are at present practically unknown on the Canadian markets. The Spanish Malagas were on the markets of Toronto and Montreal during the months of April, May and June, and were sold at an average price of approximately 25 cents per pound. Hothouse Grapes on the Montreal market during the same months brought one dollar per pound. The first Malagas from California arrive on the markets on or about August 15th, previous to which time practically no Grapes are offered.

(3) Refrigerator cars are available at Vancouver for shipments moving in car lots.

(4) As stated above, in the opinion of the wholesale trade, there would be no difficulty in the Grapes retailing at a minimum of 25 cents per pound. This would allow the trade to pay at least 15 cents per pound f.o.b. Vancouver, at which price it appears from your letter, you can profitably afford to sell.

In each of the markets referred to the wholesalers and jobbers have expressed a willingness to receive trial shipments and make every endeavour to establish a market for Australian Grapes of high quality.

The Spanish Malagas are received, at the present time, in kegs with ground cork filling, and I presume that the Australian Grapes would be shipped either in boxes or kegs with approximately the same filling.

The suggestion is made that an agent be appointed in Vancouver, as distribution would have to take place from that city by the car lots giving so many to each market throughout the West to clear up each car.

TASMANIA
We are the Leading Australian
Fruit Exporters
Fruit Canners
Jam Manufacturers
(I.X.L. Brand)
Hop Factors
(Owning the largest cool stores for this purpose in Australia)
We stock large supplies of Corrugated Strawboard, the latest and best material for packing apples for export. ; Woodwool, etc., etc.
Tasmanian Agents for Commonwealth Government Line of steamers, Federal and Shire Lines, etc.
H. Jones & Co. Ltd.
Old Wharf, Hobart

FRUIT SHIPMENTS
LONDON
Liverpool and the Continent
W. D. PEACOCK & CO.
24 Martin Lane, Cannon St.
LONDON, E.C., 4
AND HOBART, TASMANIA
Solicit Consignments.
The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

Covent Garden, London
Ridley, Houlding & Co.,
Large Receivers of Australian Fruits.
Solicit Consignments of
Apples, Pears, &c.
Best market prices and prompt account sales returned
Correspondence invited
REPRESENTATIVE IN VICTORIA
THE
International Fruit & Mercantile Co.
410 Flinders Lane. Melbourne
TASMANIA
MURDOCH BROS., Hobart

'Phone, Central 8479
F. W. VEAR
Fruit Importer and Exporter
COMMISSION AGENT
49 WILLIAM STREET, MELBOURNE, VIC.
Solicits consignments of APPLES, ORANGES, BANANAS, PINES and all other fruits.
Account sales with cheque daily.

LOVE IN A FRUIT SHOP.

This happened in a fruit shop:—

The Strawberry, which was in love, pinched the fruit next to it and blushingly said, "You're a Peach." This annoyed the Orange, who said, "I've got the pip." "Oh! don't get sour," whispered the Lemon. "I'm feeling a bit seedy myself," muttered the Water Melon. "Keep cool," said the Cucumber (aside to the Cocoanut), "you're a bit of a nut to crack." "I wish someone would buy me," said the Banana, "and look slippy about it."

HOME MAKING and UPKEEP

(By "Nymphae.")

Shops and Shopping.

Sale-Time Bargains.

THESE TIMES OF SUMMER sales the advertising managers and the window-dressers of all the drapery establishments combine their arts in such fascinating ways that it takes a strong-minded woman to choose only those articles that she really requires and to pass by temptingly arrayed odds and ends that "might come in handy."

If you can think of no useful purpose to be served by purchase, keep your money, which will be of more service to you than a lot of useless articles that require space while awaiting an opportunity of becoming useful and old-fashioned as well.

Do not cultivate the "saving" habit to any great extent or you will find cupboards, boxes and every available space crammed full of stuff that should be relegated to the fire—tiny scraps of lace, a couple of square inches of material, etc. These things I have found long after the frock for which I had saved them as possible patches had been worn out.

However, now is the time for the discriminating woman to replenish her household stocks—linen cupboards, wardrobes, hat boxes—at very reasonable costs. The drapery firms are clearing out their summer stocks to make room for winter goods, and this enables the thrifty woman to get the advantage of good materials at very much reduced prices.

It is not too late to buy summer frockings, and there are wonderful ranges of all sorts of materials from which to choose at prices that really make one wonder if we are going back and that the war had not happened.

Before going to a sale it is well to have a list of requirements as to quantity, colour, and the approximate price you are prepared to give. This greatly simplifies matters and saves no end of time when you are in the midst of a bargain-hunt.

It is well to be wary of greatly-reduced articles unless you are absolutely certain that they are perhaps drawlines, as very often it may be of a style that is going or has gone out of fashion, or the material may be a "has been."

In the matter of buying silks, too, one needs to exercise great care. I once thought that I was getting a lovely bargain—16/6 per yard silk reduced to 4/6. I took it to be made up, and the dressmaker could not do a thing with it. It was perished. I don't think that the money paid for the silk was quite wasted, for it taught me a tremendous lesson. I must confess that I simply don't believe one half the advertisements I see, nor all that polite salesmen would have me believe. I simply judge for myself.

However, there is no denying that a woman can save pounds on her annual shopping list if she use discernment and common sense at sale time.

HELPFUL HINTS.

A piece of butter-muslin wrung out in hot water, in which borax has been dissolved, and then cooled in the breeze and wrapped round butter, will help considerably to keep it firm.

* * *

At the present time moths are very plentiful. English lavender, either fresh or dry, scattered on shelves, in drawers, or in trunks, will protect woollens from the attacks of these pests.

* * *

Yellowed clothes can be whitened by soaking them in buttermilk; then wash them with soap in lukewarm water, rinse in cold water, and dry them. Repeat if necessary. Soak coarse articles longer than fine ones, and for very fine ones do not have the buttermilk too sour.

* * *

To keep brooms in good condition they should frequently be washed in hot soapsuds. It will make the brooms both tough and flexible.

* * *

A high stool is of great advantage in every kitchen. It can be used to sit down on while preparing vegetables; or whilst ironing, washing dishes, &c., thus saving much weariness and backache.

THE KITCHEN.

Desserts for Summer Days.

Banana Jelly.

Six Bananas, 1 pint Lemon Jelly.

Peel the Bananas, which should not be too ripe, and cut them in slices. Melt the Lemon Jelly, using rather less water than instructed on packet. Pour a little of this in a plain mould; let it set, then arrange some slices of Banana with more jelly to cover. When these are set spread another layer, cover with jelly and continue until the mould is full. Allow it to set quite firm and turn out when required.

Strawberry and Banana Dessert.

Four Bananas, 1 pint packet Lemon Jelly, 1 gill cream, milk, Strawberries.

Skin and mash Bananas and beat with a fork until quite smooth. Dissolve Lemon Jelly in ¼ pint water, and beat into it the Banana pulp; whisk the cream to a stiff froth, stir into other ingredients and add sufficient milk to fill a pint mould. When the jelly is quite firm, break it into pieces and turn into a glass dish; fill up spaces with ripe Strawberries, plentifully sweetened and mixed with cream.

* * *

Raspberry Jelly.

2 lbs. fresh Raspberries, ½ lb. lump sugar, 1 pint water, 1½ oz. gelatine.

Stew the Raspberries with water until thoroughly soft, then press through a muslin. To this juice add the sugar, bring up to the boil, then stir in the gelatine that should previously have soaked in cold water. Stir until this is dissolved, then pour into a wetted block mould. Leave in a cool place until firm, then turn out and garnish with fresh fruit.

* * *

Coffee Cream.

½ oz. gelatine, ¾ pint milk, ¼ pint cream, 4 tablespoonfuls coffee extract, 2 oz. castor sugar, 6 drops Vanilla Essence.

Soak gelatine in ¼ pint milk for half-an-hour, mix coffee extract with another ¼ pint, which should be made hot, but not boiled. Mix the two together, then add castor sugar and Vanilla Essence, and stir over the fire till well dissolved; strain and add the cream and the rest of the milk. Rinse a mould in cold water, then pour in cream. Stand on ice, or leave until next day before turning out.

* * *

Prune and Orange Jelly.

¼ lb. Prunes, 2 oz. sugar, ½ pint water, 2 Oranges, ½ oz. gelatine, ½ teaspoon cinnamon.

Wash Prunes, soak in boiling water with 1 teaspoonful bi-carb. soda for 20 minutes. Rinse well. Put them in a saucepan with sugar, the thinly-peeled rind of the Oranges, the cinnamon and the water. Stew slowly until tender. Sieve the Prunes with their juice into a basin, rubbing through as much of the pulp as possible. Dissolve the gelatine in the juice of the Oranges, and strain into Prune purée. Mix well, pour into a mould and set aside to cool. When required turn out and serve with cream or custard.

New Zealand.

Fruitgrowers' President Visiting London.

Mr. T. W. Attwood, president of the New Zealand Fruitgrowers' Federation, sailed by the s.s. "Ionic" in January for London. He proposes to arrive in London about 14 days before the arrival of the first shipment of New Zealand fruit in order to obtain preliminary information and a knowledge of the existing conditions which will enable him to follow the process of handling and distribution. Attention will also be paid to the condition in which the fruit is landed. Mr. Attwood is taking with him a complete selection of lantern slides illustrating the fruit industry and other subjects, his object being to give lectures in various centres.

Edward Jacobs & Sons,
Covent Garden Market London (England)
Solicit consignments of Australian Fruits
Tasmanian Representative:
W. D. Peacock & Co. Ltd.
PRINCES WHARF, HOBART
Shipping Number 418

FRUIT EXPORT.

The first shipment of New Zealand Apples is due to leave on February 15 on the "Remuera," taking 14,500 cases. Arrangements are also being made for direct shipments to Hull. The New Zealand Government has decided to extend the marketing expenses guarantee of 11/- per case to cover 150,000 cases. This guarantee covers only what is classed as "fancy" fruit, and is limited to fruit shipped on consignment. The all-risk insurance policy has been cut out this season, the Government only requiring insurance against total loss. The insurance will be effected through the Fruitgrowers' Federation at 2d. per case.

No definite figures are yet available regarding the total export for the 1923 season, but it is anticipated that over 200,000 cases will be sent to Great Britain and South America.

AUSTRALIAN FRUIT FOR MANCHESTER.

That there is an excellent market in Manchester for the primary products of Australia is definitely affirmed by Capt. W. J. Wade, M.B.E., who has been appointed as the Australasian representative for the Manchester Ship Canal Co.

Capt. Wade points out that there is a population of 13,000,000 within a 75 mile radius of Manchester. That great town, once inland, was made into a high-class commercial port by the construction of the Manchester Ship Canal, at a cost of £14,000,000. Manchester is now the fourth port in the United Kingdom, that is, on the basis of its export and import trade.

Manchester is the natural centre for distribution for the County of Lancashire, which is the home of the cotton and engineering trade of Great Britain. Within easy reach of Manchester are such towns as Bolton, with a population of 200,000; Blackburn, 200,000; Wigan, Acrington and Bury, each with 100,000 population. The County of Yorkshire is also easily reached from the port of Manchester. There is a big artisan population, with considerable purchasing power.

It costs 35/- per ton to take Australian meat from London to Manchester, and even then the quality is not so good as when delivered at Manchester as the first port of call. Capt. Wade's idea is that steamers should trade regularly between Australia and Manchester, carrying such products as wool, meat, butter, wheat, fruit, &c.

Fruit consignors, states Capt. Wade, would do well to instruct their agents to secure space to Manchester direct, which would thus relieve the London market, save freight and open practically a new avenue for the sale of Australian produce in large industrial centres.

Prior to coming to Australia, Capt. Wade occupied the position of General Superintendent to the Manchester Municipal Abattoirs, Cool Stores, Municipal Meat, Fish, Poultry and other produce markets, and the Imported Fruit Auction Rooms for fifteen years, and was also President of the National Cool Stores' Association for five years.

T. STOTT & SONS
Fruit Merchants
Established 1882.
A Trial Consignment soli cited from Growers in all States.
Prompt Settlement.
11 WESTERN MARKET
Melbourne

Capt. Wade states that in the Corporation Market for fruit and vegetables, there are 700 to 800 traders. This was known as the Manchester-Smithfield Market. These markets are stated to be only second to London. They cover 3½ acres.

Not only is this of interest to producers of fresh fruit, but Capt. Wade insists that there are big developments possible in the export through Manchester of canned and dried fruits.

Capt. Wade will be happy to confer or correspond with bodies of producers. His address is 8 Bridge Street, Sydney.

The Difference Between Profit and Loss Lies in Clean Orchards

A New Era in Orchard Sprays

Gumlypta Orchard Spray Mixture

The combined insecticide and fumigant that can be used on your trees at any time of the year, and costing less than 3d. per gallon for effective strength.
Destroys Woolly and all Aphis, Red Spider and all Scale Insects, White Louse, White and Pink Wax.
We recommend 1 part Gumlypta to forty parts water for general purposes.
GUMLYPTA ORCHARD SPRAY is Eucalyptus Oil and other insect destroying oils scientifically blended with Carbon Bi-sulphide, etc., so as to mix with water at any strength.
Prevent Fungus growth and Leaf Curl, etc.

PRICES:—7/9 per gallon in 4 gallon tins, 8/6 in 1 gallon tins, F.O.B. Sydney

Pamphlet and Testimonials on request

GILLARD GORDON (Aus.) LTD., Rozelle, N.S.W.

GRAPES FOR EXPORT.

Efforts are being made to establish the export trade in Grapes, particularly the Ohanez variety. Mr. C. E. Howship (representing Messrs. Swann & Co., London), who has visited growers of Ohanez Grapes, is organizing consignments of some 1,000 cases this season. The bulk will go in cold storage, though Mr. Howship insists that it is perfectly safe to send them as ordinary cargo, if packed barrels with granulated cork. Some small lots will be shipped for experimental purposes, as ordinary cargo.

Ohanez Grapes are sent from Almeria, Spain, for journeys of from 35 to 45 days across the tropics, as open deck cargo. These keep much longer after arrival at destination, because of not having been in cold storage.

Correspondence Received.—The Editor acknowledges correspondence for which room could not be found this issue:—C. V. Hives, Brisbane, re sugar; Jas. Moody, Pakenham, Vic., re Codlin Moth.

J. G. Mumford

Est. 1906

Fruit Merchant

Fruit and Vegetables sold for growers from all States.

Account sales posted daily.

Exporter.

Exporter of fruit to English and Continental markets.

449-451 Flinders Lane, Fruit Exchange, Melb.

Reference: Satisfied growers in all states.

ESTABLISHED 1879

Special Announcement to Australian Orchardists and Shippers ! !

THOS. PATERSON & CO.

FRUIT & PRODUCE BROKERS & AUCTIONEERS

Vogel Street, DUNEDIN, New Zealand

HAVE THE OLDEST ESTABLISHED AND MOST UP-TO-DATE MARKET

And Solicit Consignments of

Australian Oranges, Lemons, Passions, Grapes, Bananas, etc.,

All Consignments sold under the personal supervision of Principals by our expert salesmen. We have our regular circle of buyers and can SECURE HIGHEST PRICES: *Prompt returns a feature in our business.*

A TRIAL SOLICITED

Address all correspondence TO P.O. BOX 132 DUNEDIN. cable 'Patricroft," Dunedin
Bentley's Codes Private Fruit Code address

Commonwealth Government Line of Steamers

FAST PASSENGER AND CARGO SERVICE TO LONDON

Via Adelaide, Fremantle, Colombo and Port Said, transhipping at Colombo for Calcutta, Rangoon, Madras and Bombay : : :

Vessels Sail from Port Melbourne as under:—

T.S.S.	"ESPERANCE BAY"	13,850 tons	R. MacKenzie	7th Feb. 1923
„	"MORETON BAY"	13,850 „	J. Mason	7th Mar. 1923
„	"JERVIS BAY"	13,850 „	W. R. Chaplin	4th April 1923
„	"LARGS BAY"	13,850 „	J. Beighton	25th April 1923
„	"HOBSON'S BAY"	13,850 „	F. J. Ogilvie	16th May 1923

Special Provision made for Refrigerated Cargo

For further particulars apply to:

Australian Head Office - - 447-451 Collins Street, Melbourne

Branch Offices: SYDNEY, ADELAIDE, BRISBANE

Agents all Australian Ports

Answers to Queries

Packing Fruit—Stocks for Cherries—Pollinating Pears—Eradicating Paspalum—Varieties of Prune d'Agen—P. Barry Pear—Mixing Manures—Removing Couch Grass—Black Cherry Aphis

Packing Fruit.

A South Australian reader writes:—"I would like to ask a question in reference to Apple packing. In the November 'Fruit World' and also some months ago, you gave plates explaining the systems advocated by the writers, and I noted that it showed the Apples on their side. Is it the usual custom in vogue to pack in this way? I have seen and also done a good deal of packing, using the 2-2 pack, except for 2¼, then 3-2, but I have not seen any packed as above."

Answer (by Basil Krone, Victorian Government Fruit Inspector)—

When packing Apples it is recognised that the hardest part of the Apple is that portion around or near the calyx end, and less susceptible to bruising than the portion near the stalk end, and in the ordinary way with diagonal packing the fruit in all the packs (3-2, 2-2, and 2-1) face in the same direction as shown in Fig. 6 and Fig. 12 in the December "Fruit World." This brings the hardest portion of the fruit against the sides of the case, also if the side of the case were opened it would be a much more attractive pack to have the eye of the Apple or a portion of it showing than the stalk end.

I have been asked many times would it be permissable or would it break the standardising of the packs, if the full eye (as your South Australian correspondent has asked) of each Apple, instead of only a portion of it, faced the side of the case, as is seen in the 2-2 pack in Fig. 10? I have thoroughly tested this, and find that it does not matter if the Apple is turned full to the side, or only half on, as in both instances the harder portion of the Apple will be against the side of the case, and also both packs would be the same. Take as an example the 2¾ inch grade; in both instances it would be a 2-2 pack to be used, both would contain six layers and in both cases each layer would contain 24 Apples, and most important of all both would contain exactly the same number of fruit, that is a total of 144 Apples in each case. The only difference is that in one case each specimen is turned round a little, which makes the finished appearance a bit neater and more attractive. Of course, all sizes of Apples will not permit of being turned full to the side, but 2¾ inch is one that will, and I had the photograph taken to show its attractiveness when the side is taken off and also to show its similarity to other packs, that is, no two fruits are resting on top of each other in any direction.

I would recommend all the packs to face in the same way as "South Australian" reader understands the 3-2 and 2-2 packs to face, but should he turn his fruit slightly, as some packers do, and is shown in Fig. 10, he would not be wrong.

Stocks for Cherries.—"H. V. S." Batlow, New South Wales, asks:—

(1) What varieties of Cherries suit the Mazzard and Kentish stocks respectively?

(2) Allowing that the varieties St. Margaret and Noble are shy bearers on Mazzard stock, and do not come into bearing until twelfth to fifteenth year, would it pay to work eight-year-old trees of these varieties over to a variety which did well on the Mazzard stock? What variety is recommended for the latter purpose?

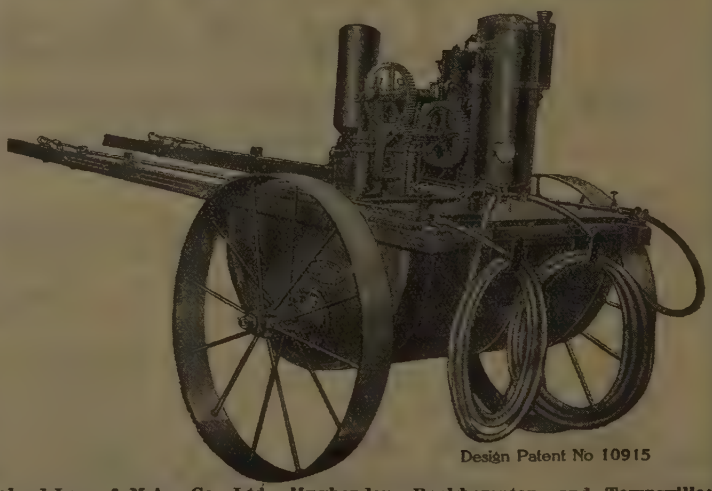
Answer (by W. J. Allen, N.S.W. Government Fruit Expert):—

ORCHARDISTS!!

Your Conception of the Perfect Spray Plant has Materialised in the "Cooper" Perfect Balance

It possesses just the advantages that you look for. The equipment is highly efficient, and the strength, balance, and ease of operation leave nothing to be desired. The broad wheels ensure easy pulling over soft soil and the patented Balancing Design lightens work for the horses. When you think of the loss caused by orchard pests and the time and labour spent in combating them you will realise that a Spray Plant like this fills a long-felt need.

Let us send you further particulars.



Design Patent No 10915

COOPER
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(1) Cherries suitable for Kentish and Mazzard stocks respectively, are:—
Kentish.—St. Margaret, Florence, Early Purple Guigne, Noble.
Mazzard.—Early Lyons, Eagle Seedling, Bedford's Prolific, Napoleon.
(2) I would feel inclined to take the risk of leaving them as they are. However, if the grower prefers to work them over, "Early Lyons" would be one of the best for the purpose.

Varieties of Prune D'Agen.

In reply to a query from one of our readers regarding the varieties of Prune D'Agen growing in his orchard, Mr. G. Quinn, Horticultural Instructor, Adelaide, South Australia, advises as follows:—

"Insofar as the term 'slipstone' and 'clingstone' may be applied to Plums or Prunes, I should say the D'Agen is a 'slipstone,' though this has not quite such a literal bearing as in the case of Peaches.

"I have often found what I believe to be true D'Agen Prune fruits to the stones of which the pulp adhered more tenaciously than is usual, but I have not had an opportunity of noting whether such fruits came from a certain specified tree or trees of the variety.

"I think that the conditions under which fruits are grown and cured would affect this adhesiveness, whilst it is quite possible certain imitations or sports have occurred in this variety of Prune. There is so much confusion over the nomenclature of the French types of Prune that possibly two distinct though closely related varieties are under observation in this case."

Mr. G. W. Peart and Mr. L. J. Wicks, nurserymen, state:—

"The true Prune D'Agen is absolutely freestone and therefore the second sample (smaller fruit, larger stone and clingstone) is not a genuine D'Agen."

Pollinating Pears.

Eradicating Paspalum.

"Q." (Leeton, N.S.W.), asks:—
1. Is the Packham's Triumph Pear supposed to blossom at the same time as the William Bon Chretien?
2. Is there any way of eradicating Paspalum dilatatum from head ditches on irrigation farms?

Answer (by E. E. Pescott, F.L.S.):—
1. Packham's Triumph in the South, usually flowers a few days earlier than Williams, so that the later flowers of the one would be out at the same time as the earlier flowers of the other.
2. Only by hoeing or digging out the plants.

P. Barry Pear.

"Reader," Margate (Tas.), asks:—"Have you any record of P. Barry Pear. We have some growing, but only just started bearing. Would like to know good qualities, or bad, if any We have the kind growing in fairly good land, with clayey subsoil, not too dry and well situated, also mixed with other well known and choicest varieties. Any information regarding this variety would be appreciated."

Answer (by P. H. Thomas, Tasmanian Government Fruit Expert).—
The P. Barry Pear is not grown commercially in Tasmania, and generally only figures as an odd specimen in experimental plantations. The Pear is grown a good deal in California and New Zealand, and has the characteristics of a vigorous growth, and pronounced lateral fruiting habit.

The Pear is somewhat of the same shape as a Napoleon, but is shorter and more blunt at the stalk. It is of a greenish colour, and has a rough skin marked with large russet dots, ranking as of fair quality. The few specimens that I have come in contact with fruit satisfactorily, and have been growing under very diverse conditions. P. Barry has found favour owing to its keeping qualities, and is a good variety for cold storage purposes, keeping throughout the winter.

Like other of the vigorous varieties of the Pyrus communis species, it has been found rather susceptible to "Fire-blight" (Bacillus amylovorus). Personally, with my limited experience of the variety commercially, I could not recomend same against such varieties as Josephine de Malines, Glou Morceau, Winter Cole, etc.

Answer (by G. W. Peart, Goodman's Nursery, Bairnsdale, Vic.).—
Re P. Barry Pear. This is a Californian Seedling raised by B. S. Fox, and the fruit is described as being large, elongated pyriform, a little obtuse; skin deep yellow; nearly covered with a rich golden russet; stalk of medium length and thickness; flesh whitish, fine, juicy, melting, slightly vinous and rich.

The Californian Nursery Co. says it is an early and prolific bearer, whilst the Southern Californian Nurserymen's Association recommends the P. Barry for planting, and says it is to some extent displacing Winter Nelis as a more healthy tree and more certain bearer.

I have not fruited the variety here, but, some years ago when N.Z. orchardists could import Australian-raised trees, I shipped some fairly big quantities of this variety to the Dominion.

Mixing Manures.—"K.," Leeton, New South Wales, asks—"Would Gypsum and Superphosphate, or Gypsum and Potash used at the same time have the effect of killing each other?"

Answer (by Australian Fertilizers Ltd., Sydney):—
There is nothing to prevent your reader from mixing Gypsum and Superphosphate or Gypsum and Potash, but we fail to see why it should be necessary to mix Gypsum with Super., seeing that there is already present a fair percentage of Gypsum or Sulphate/Lime in Superphosphate, which is brought about in the process of manufacture.

(*continued on next page*)

FIRST!

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Removing Couch Grass.

"Yanco," Leeton, N.S.W., writes:—"I have a considerable area infested with Couch Grass, and would like to know how to get rid of it.

Answer.—It would be a very difficult proposition to clear an orchard of Couch Grass.

Couch Grass is affected by cold weather; it merely disappears for the winter, starting again with the first signs of spring.

The difficulty in getting rid of Couch Grass is that it roots down deeply, and that every small piece of runner will grow. A sowing of Cow Peas would be beneficial to the orchard, and if put in now and ploughed under in the autumn should materially help to keep down the Couch Grass. It would then be advisable to fallow, with a sowing of Berseem Clover, which could be cut through the winter and ploughed under again in the spring, repeating the operation with Cow Peas or some other crop suitable for ploughing under next summer. The Cow Peas and Berseem Clover would give particularly good results as cover crops and the cutting for green feed, and the ploughing under might in time have the desired effect.

Black Cherry Aphis.—"Orchardist," East Tamar, Tasmania, writes:—

1. Could you give me any information as to the manner in which Black Aphis of the Cherry can be controlled? This pest first made its appearance here (in my orchard) in 1921 on some Cherry trees fully 16 years old; last season it spread through the whole plantation and on some trees I did not pick a marketable Cherry.

2. Are all varieties subject to it?

3. Is a winter spraying of oil or lime sulphur—in addition to tobacco spraying in the spring—of any help?

4. Is the winter stage carried over on the roots, and is any treatment necessary here?

5. Is this pest identical with the Black Peach Aphis?

Answer (by P. H. Thomas, Tas. Govt. Fruit Expert):—

(1) The Black Cherry Aphis (Myzus cerasi Fab.) may be controlled by spraying with a miscible oil at 1 in 12, or with lime sulphur solution at 1 in 8, at the late dormant period. Infestations appearing when foliage and fruit are on the trees should also be treated with a nicotine and soap spray (home-made) or the commercial nicotine concentrate.

(2) This pest has not been very troublesome until this season. I have received specimens that have attacked a number of varieties.

(3) Yes: Applications made as detailed in Query (1) will destroy the overwintering eggs that are deposited in the crevices of branches and buds of trees infested.

(4 and 5) Entomologists determine the Black Cherry Louse or Aphis as of a different species from the Black Peach Aphis (Aphis Persicæ niger—Smith). The former is characterized by the long swollen cornicles or honey tubes, the overwintering eggs being deposited in the crevices of limbs. Incidentally, the Black Cherry Louse is practically confined to the Cherry, whilst the Black Peach Aphis, which winters on the roots of the trees, will attack Peaches, Plums, Nectarines, &c.

BREAKWINDS FOR ORCHARDS.

Almonds, Figs and Olives are Useful and Profitable.

A grower in a Northern Victoria irrigation area near Swan Hill asks if Almonds are suitable as a breakwind. Fierce wind storms, at times, sweep across this section.

What variety of Almonds is recommended: should more than one variety be planted for pollination purposes? Is the Chellaston a good variety?

Our correspondent is also considering planting Mahogany Gums as a breakwind, but desires, if possible, to have something more profitable.

Answer (by C. G. Savage, Deputy Horticultural Instructor, South Australia).—

Almonds make a very profitable breakwind for the protection of an orchard. The trees should be spaced about 15 feet apart, in either single or double rows.

The trees should be pruned for the first three or four years to build in a firm framework to the trees, after that a light pruning about once in three years will be found sufficient. The Almond is often left unpruned, but if treated as above better crops will be carried.

The varieties that have so far proved best under the Murray Valley conditions (these notes are drawn from only a limited number of varieties under test), are:—I.X.L., Commercial, White Nonpariel, Hatch's Nonpariel (Papershell), and Ne Plus Ultra. Of these varieties I.X.L., White Nonpareil, and Ne Plus Ultra have proved the most profitable, and the growth, being of a spreading habit, forms most effective breakwinds. These three varieties will cross pollinate, the I.X.L. is the first to flower, and is in full bloom when the other two varieties commence to flower. Commercial flowers during same period as I.X.L.

Chellaston is a comparatively new South Australian variety, and has a very good name, and though I cannot speak from personal experience with the Almond, I have it on very good authority that it is a very profitable sort.

The Smyrna and Capri Figs also make good breakwinds, and produce fruit of high quality, which can be readily sold both in the fresh and dried state.

Olives are planted as windbreaks and produce payable crops of fruit.

TABLE LANDS.

Mrs. S. Abbott, Table Lands, Morrisons, Victoria, writes:—"I suffered a great deal of agony from indigestion and severe pains after eating until I tried your celebrated A.M.S. remedy. I had only taken two bottles when I got relief, so I can thoroughly recommend it to anyone suffering from this distressful complaint." A.M.S. is sold by all chemists and country storekeepers at 3/-, by post 3/6, and is manufactured by T. A. Dickson, chemist, Geelong.

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Comparison with Australia.

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. . . .

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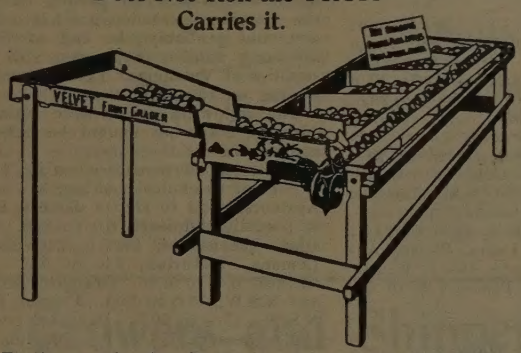

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British and Australasian Market Reports

Great Britain.

London (16/12/22).

The following are the prices ruling, as published in the "Fruit, Flower and Vegetable Trades' Journal," December 16th, 1922:—

Apples, English, 3/- to 8/- per bushel; Cox's, 4/- to 10/- per ½ bushel; Nova Scotian, 14/- to 30/- per barrel; American, 30/- to 36/-. Bananas, Fyffe, 10/6 to 22/6 per crate; Hoya, 19/- to 28/-. Dates, 5/- to 8/- per doz. cartons. Grapes, English Alicante, 1/- to 1/9 per lb.; Muscat, 3/- to 6/-; Almeria, 24/- to 28/- per barrel. Grape fruit, Jamaica, 17/6 to 20/- per box. Lemons, Messina 300's, 24/- to 35/- per case. Oranges, Valencia 300's, 18/6 to 24/-; 420's, 31/- to 35/-. Pears, Beurre Anjou, 24/- to 25/- per case; Winter Nelis, 16/- to 20/-. Pines, 1/6 to 5/- each.

New South Wales.

Sydney (24/1/23).

Mr. F. Chilton (City Fruit Markets), reports as follows:—

Queensland Fruits.—Bananas, 10/- to 17/- per case; Pines, Smooths, 12/- to 14/-; Ripleys, 7/- to 10/-; Mangoes, Choice varieties, 9/- to 16/- per bushel case; Tomatoes, 5/- to 8/- per ½ case. **New South Wales Fruits.**—Bananas, Tweed River, 12/- to 22/- per case; Oranges, 10/- to 16/- per bushel case; Lemons, 7/- to 14/-; Passions, 3/- to 8/- per ½ case; Apricots, 3/- to 5/-; Peaches, 2/- to 6/-; Plums, 2/- to 8/-; Nectarines, 4/- to 7/-; Apples, Cooking, 5/- to 8/- per bushel case; Eating, 4/- to 15/-; Jam lots, 2/- to 2/6. **Victorian Fruits.**—Apples, Cooking, 5/- to 7/- per bushel case; Eating, 8/- to 12/-; Peaches, 5/- to 9/-; Nectarines, 6/- to 11/-; Pears, 7/- to 9/-. **Tasmanian.**—Apricots, 3/6 to 6/- per ½ case.

The demand is good for all lines of good-quality, but rough and inferior qualities are not wanted.

Peaches are fast becoming cheaper in consequence of increased supply, but there is a shortage of choice dessert Apples, Pears, Pines, Grapes and Plums.

Victoria.

Melbourne (27/1/23).

Large stocks of Peaches, Plums, Pears, and Apricots arrived on the local markets during January. Towards the end of the month extremely heavy consignments of Plums and Peaches arrived and prices dropped considerably. The markets are glutted with all varieties of Plums, and prices have been down to 2/- per case. The position is made worse by the factories not buying. There is a glut of Peaches and Nectarines, and now that Pears are coming forward, the outlook for the next two months is not bright. Early varieties of Apples are also coming on the market, but are meeting with a very poor demand owing to the large quantities of soft fruit available. Grapes are also starting to come forward in small quantities.

Valencia late Oranges are still arriving and meeting a fair demand. An interesting feature in regard to Oranges is the fact that the season is being spread over a longer period. A few years back Oranges could not be secured after November, and sales had to be made within a short period, but now the season is extended until late January, and probably the end of February, as a number of growers still have supplies of Valencias. Lemons continue a drug on the market.

The following prices were ruling on January 26th, but cannot be taken as a criterion for the future: —

Apples, good to choice eating, 3/- to 5/-; good to choice cooking, 3/- to 4/-. Apricots, good to choice dessert, 8/- to 9/-; medium dessert, 6/- to 6/6. Bananas, Queensland, 15/- to 21/- double. Lemons, Victorian, 3/- to 5/-. Nectarines, 5/- to 6/6. Oranges, Mildura and N.S.W., 12/- to 15/-. Passion Fruit, N.S.W., 15/- to 20/-. Peaches, good to choice dessert, 7/- to 9/-; medium dessert, 4/- to 6/-; canning, 3/6 to 5/6. Pears, W. Bc., green, 4/- to 6/-; ripe, 6/- to 8/-. Plums, Dark, Light and Japanese, 2/6 to 3/6. Pineapples, Ripley, 10/- to 12/- double.

Queensland.

Brisbane (22/1/23).

Oranges, Sydney choice, 14/- to 17/-; few extra choice, to 20/- a bushel case; second crop, 6/- to 10/-. Mangoes, local, 1/6 to 2/6. Lemons, Italian, 20/- to 23/-; S.A., 16/-; local, 6/- to 7/- a ½ bushel case. Peaches, choice, 3/- to 4/-; extra choice, to 6/-. Plums, choice, 3/- to 4/-; extra choice, to 6/-; Angelena, 6/- to 7/-. Apples, Stan-

thorpe, cooking, choice, 7/- to 9/-; medium, 5/- to 6/-; small, 2/- to 3/-; eating, choice, 12/- to 13/-; medium, 9/- to 10/-; small, 6/- to 8/-. Nectarines, small, 1/- to 1/6; medium, 2/- to 2/6; choice, to 3/6; extra choice, to 4/-. Passion Fruit, choice, 3/- to 4/-; medium, 2/- to 3/-. Papaws, choice, 5/- to 6/- a dump case; medium, 3/- to 4/-; others, 2/- to 3/6 a tray. Pears, Stanthorpe, green, choice, 6/- to 9/- a bushel case; medium, 3/- to 5/-; Victorian, choice, 12/- to 14/6. Grapes, local black, 5d. to 7d. a lb.; white, 2d. to 3d.; Iona, 4½d.; Muscatel, 9d. to 1/-; Zero, 4d. to 5½d.; Roma, 3d. to 4d. Pineapples, choice, 2/- to 2/6 a doz.; medium, 1/- to 2/-. Bananas, choice, 5d. to 8d.; sugars, 4d. to 7d.; Lady Fingers, 4d. to 9d.; 4/- to 8/- a case; 2/- to 5/- a bunch.

Western Australia.

Perth (19/1/23).

Apples, dessert, best, 5/- to 8/-; inferior, to 3/-; cooking, best, 4/- to 7/-; others, to 3/6. Pears, Bartlett's, a few, 6/- to 7/3; others, to 4/6; other varieties, to 3/6. Oranges, dumps, best, to 14/-; others, to 8/-; flats, best, to 11/6; others, to 7/-. Lemons, a few, 4/- to 6/9; others, down to 1/-. Peaches, best, 10/- to 16/3; others, to 7/- . Apricots, best, to 13/9; small, to 8/-. Nectarines, best, 13/- to 17/-; others, to 8/-. Plums, prime lines, 6/- to 11/-; medium, to 4/6; others, to 3/-. Strawberries, to 8/6. Passion Fruit, 6/- to 8/6; ¼ cases, 3/- to 4/6. Figs, to 6/3. Grapes, open Chasselis, to 5/6; mixed, to 7/9; closed, to 3/6.

New Zealand.

Dunedin (15/1/23).

Reilly's Central Produce Mart Ltd. report under date 15th January:—Our market is fully supplied with all varieties of stone fruits; large quantities of Peaches, Apricots and Plums have practically extinguished the demand for citrus fruits, the only enquiry being for Passions, Bananas, and Pineapples.

Large supplies of American Oranges and Lemons have arrived, American Oranges selling at 40/- and Lemons at 55/- per case.

We anticipate Pineapples, which we have arriving from Brisbane, to realize 22/6; the Bananas, if prime, 22/-; and the Passions, 25/-.

Valencia Oranges, which arrived by the "Moeraki," realized 16/-.

We have confidence in recommending consignments of Persimmons, Passion Fruit, Pineapples and prime quality Bananas.

SOUTH AUSTRALIAN PLUMS AND PEARS FOR EXPORT.

The S.A. Fruitgrowers and Market Gardeners' Association are arranging with the Government Produce and Export Department for two shipments of Plums and Pears to the London market in the first week in February. Committees have been appointed to represent the various centres. The conveners are:—Messrs. R. Hunter (Montacute), A. Vicars (Forest Range), W. Miller (Balhannah), A. Petersen (Upper Sturt and Blackwood), W. R. Gray (Kersbrook and Gumeracha), G. Brown (Williamstown), E. E. Chapman and M. Maughan (Paracombe and Houghton), H. E. Pitt (Adelaide Plains), and E. Naughton (other districts). The shipments will comprise about 2,000 cases of Plums and Pears. It has been decided to grade and pack the fruit in half-cases, and crates of three trays. The larger varieties will be wrapped in tissue paper, and the others packed with wood wool. The fruit will be precooled and shipped under one brand—South Australian Produce Export Department—but each grower will have a number allotted, and a letter representing his district. It is expected that a large quantity of Diamond and Golden Drop Plums will be shipped, these varieties having carried well and realized handsome prices last year.

VICTORIAN ORCHARDISTS' CO-OPERATIVE ASSOCIATION LTD.

Mr. Stott Resigns.

(To the Editor "Fruit World.")

Sir,—I would be favoured if, through your columns, you would notify shareholders of the Victorian Orchardists' Co-operative Association Ltd. that I am not now a Director, as I recently sent in my resignation.—Yours, &c.,

SYDNEY STOTT.

A NEW SPRAYING PREPARATION AND PLANT STIMULANT.

Some interesting experiments have been carried out by Mr. G. T. H. Walters, who has had a number of years experience growing Tomatoes at Corowa, with a new spraying preparation for Tomato Wilt, blight and other pests on vegetables, etc. The experiments have been carried out at Chelsea (Vic.). Tomatoes, Beans and Peas were planted in land surrounded by titree, and with all kinds of root growth and worms in the soil. The plants made no headway and were badly affected with wilt and other diseases, and dying. An application of the new spraying mixture and plant stimulant was applied to the foliage and roots, with remarkable results. When inspected on January 16th, the plants were in excellent condition—clean and healthy, and carrying good crops.

Mr. Walters has been carrying out experiments during the last three years and he is now satisfied that he has discovered a preparation which will not only prove a boon to vegetable growers, but also to orchardists and vignerons in combating black spot, downy mildew and other diseases.

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GRAPES, CHERRIES, PEARS, EARLY PLUMS, APRICOTS, CITRUS FRUITS OF ALL DESCRIPTIONS, PINES, PASSIONS, ETC., ETC.

Will find it to their advantage to ship their fruits direct to

REILLY'S CENTRAL PRODUCE MART LTD., Moray Place, Dunedin, N.Z.

Using the direct boat twice a month from Sydney, or every ten days from Melbourne.

REMEMBER WHO FOUGHT to have the duty on CITRUS FRUITS removed, and fought strenuously for better SHIPPING SERVICE between our respective countries.

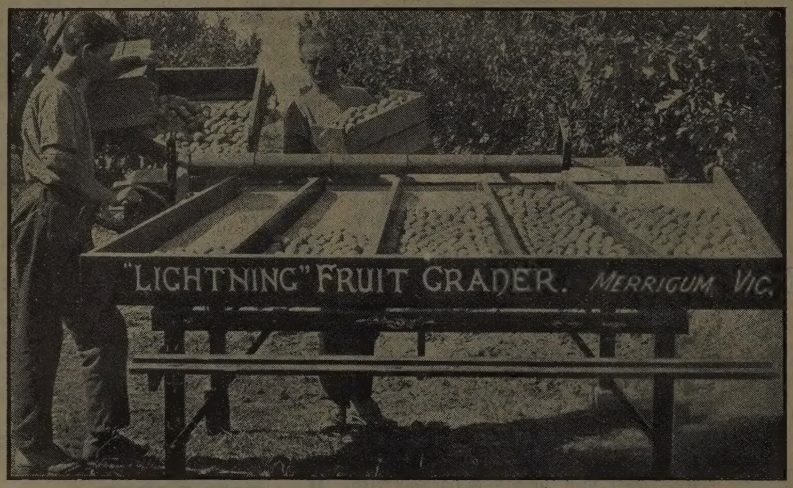
We have the Most Central and Largest Saleroom in the South Island
A Staff trained to the Work. Our Advice is at your Service

Write or Cable - - "REILLY DUNEDIN" - - and Satisfaction is assured

Grade You Fruit Quickly and Accurately with

The LIGHTNING FRUIT GRADER

(Patent Applied for)



Grades

Oranges, Peaches, Apricots, Plums, Apples, Lemons

and all other fruits

Like Lightning

Perfectly simple to operate

Fruit rolls on to belt, thence into padded bins, no drop anywhere.

The Rubber Cylinder and Belt insures Fruit against bruising.

Made in Three sizes up to 10 Grades.

Write for particulars

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Genuine "MESGAWI"
BERSEEM CLOVER

"Mesgawi" Berseem Clover is an ideal Winter Fodder. It yields excellent pasture, can be cut for green feed, or made into hay. A splendid soil improver, owing to the fact that it adds large quantities of Humus and Nitrogen to the soil.

Samples and Prices on Application.

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Grasses and Clovers

"Tarwei" **Strawberry Clover**
Machine Dressed **Sweet Clover**
Perennial Ryegrass. Italian Ryegrass
Subterranean Clover. Creeping Bent
Crested Dogstail. Cocksfoot.
Alsike. Cow Grass. Red Clover.
White Clover. Cluster Clover.

Further Particulars, Samples and Prices Free on Application.

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